

Reviewing the e-research support environment: A case study at the Library of Open University Sri Lanka

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ABSTRACT

The purpose of this paper is to discuss a project that has been recently launched at the Open University of Sri Lanka (OUSL) Library with the intention of modernizing its research support service component. The main aim is to cater for the OUSL research community that is gradually transforming towards e-research practices. The project is designed to be carried out in three phases, viz. developing a framework on global research support environment in the university setup, assessing the research support services at the OUSL Library, and formulating an action plan to extend research support services at the OUSL Library together with a strategic plan to build a researcher-friendly environment at OUSL. This paper presents the outcomes of the first phase and the partially-completed second phase of this project. A framework on global research support environment that was developed through a multi-stepped review process and peer comments is presented with figures and descriptions. Next, an account on the assessment of research support services at the OUSL Library is presented to disclose the status of research support at the OUSL Library. This analysis, which is on par with the global status denoted by the proposed framework that comprises of seven modules, 34 elements and 210 items, has highlighted a range of aspects that could be improved at the OUSL Library.

Keywords: Research support services; E-research practices; Academic libraries; Open University of Sri Lanka

INTRODUCTION

The research support service component has always been a significant part of the service body of the Open University of Sri Lanka (OUSL) Library. The document delivery service and the interlibrary loan service are the two oldest components and both services were re-launched in 2010 with an improved virtual interface and a physical helpdesk. Currently, users are given multiple requesting options, including submitting the request via an online form. In addition, electronic delivery of documents to the users' desktops is also available. Several researchers have voiced their satisfaction on the reduced turnaround time and the enhanced fulfillment rate since the re-launching of the services. The fully-equipped 'Skills Development Unit', the open access repository for research publications, and the specialized staff research area are the other three recent developments that have been instituted at the OUSL Library with the intention of

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enhancing the research support facilities. However, the research support services at the Library are mainly focused on the initial stages of the research process (i.e. the idea discovery stage), except for a few non-streamlined services such as advising the researchers on publication strategies and patent drafting process.

The librarians at OUSL are aware that enormous changes are taking place in research support arena of libraries worldwide with the advancements of the ICT and the web technologies. The research culture of OUSL also seems to be growing towards the e-research practices and several researchers have requested support and advice on different e-research related subjects that are beyond our service boundaries. Therefore, the OUSL Library has decided to review the global research support environment at the university setup and assess the research support services component of the Library in order to develop an action plan to extend research support services as a mission to prepare for the impending future.

RESEARCH DESIGN

The project has been designed to be carried out in three phases to achieve the following objectives.

- Develop a framework on global research support environment in the university setup
- Assess the research support services provided by the OUSL Library
- Develop a strategic plan to build a researcher friendly environment at the OUSL, and an action plan to extend research support services at the OUSL Library.

Status of ongoing data collection process

The first phase of the study was designed to develop a framework on global research support environment in the university setup. In order to understand the key components and the current trends in the field, more than 30 recent scholarly articles were located through a literature survey conducted during the month of March 2014. In addition, institutional and library websites of the top ten universities in the World Universities Ranking schedule 2013-2014 (web link: <http://www.timeshighereducation.co.uk/world-university-rankings/2013-14/world-ranking>) were viewed during the first week of April 2014.

The goal of the second phase of the study is to assess the research support services provided by the OUSL library. This phase includes three components analyzing of the archival data, a user survey and a set of focus group discussion sessions. The second phase that began towards the end of April 2014, in parallel to the first phase, has now gone half-way. Compilation of the archival data generated by the Libsys (i.e. library management software system) has been completed and the user survey instrument that measures the level of usage and the user perceptions towards the research support services rendered by the OUSL Library is under construction. The sample of the survey will be selected from among members of the teaching staff and postgraduate students of OUSL using stratified random sampling techniques to represent a cross section of the OUSL community. It has been planned to launch the pilot study by mid-July 2014 and the target date for completion of the survey is October 30, 2014. The final step of the second phase (i.e. focus group discussion sessions) that aims at identifying attitudes, e-

research literacy levels, and skills training requirements of the library staff has been scheduled for the last week of August 2014.

During the third phase, an action plan to extend research support services at the OUSL Library and a strategic plan to build a researcher friendly environment at the OUSL will be formulated based on the findings of the first and the second phases of the study.

FINDINGS AND DISCUSSION

Development of framework on global research support environment in the university setup

A framework on global research support environment in the university setup that is inclusive of seven modules (i.e. Librarians, Researchers, Research Support Services, Library Collections, ICT Tools, Institutional Research Infrastructure, and Evaluation and Promotion) has been developed based on the data collected in the first phase of the study. At the initial stage, separate accounts on the modules have been compiled by listing the facts and data identified through literature and websites. Then, each account was further analyzed to identify the major categories and key factors that determine the level of impact of the particular component on the research support environment. Following this mechanism, information packs were designed in order to include an extensive-array of key dimensions to each module of the framework. Finally, the draft of the framework was refined through self-evaluation and peer comments.

(a) Librarians

At the global level, librarians have empowered themselves impressively to become equal professional partners in the research process and have secured a central place in the modern e-research landscape. The information pack “Librarians” comprises of six elements namely, ‘Revised traditional roles’; ‘New roles’; ‘Skills and knowledge’; ‘Mechanisms for acquiring skills and knowledge’; ‘Strength of the staff’ and ‘Dedicated staff positions to support research’. Figure 1 illustrates the contents of the information pack.

As pointed out by several authors (Mamtora, 2013; Borchert & Young, 2010; McBain, Culshaw & Hall, 2013), librarians need a wide-spectrum of skills and knowledge to be able to develop and deliver services to researchers from various disciplines. Twenty-seven different ‘skills and knowledge’ areas that are essential for today’s librarians were identified at the first stage and as shown in Figure 1, these areas have been categorized into 14 fields. This gives an idea on the diversity of skills and knowledge needed by today’s librarians to become smart competitors in the information business. Fortunately, opportunities for acquiring skills and knowledge are growing and librarians can select their programs from face to face or online options. ‘Revised traditional roles’ of librarians have been presented by five most critical roles identified. Similarly, ‘New roles’ of librarians have been presented by eight most critical roles identified. The remaining two elements (i.e. Strength of the staff and Dedicated staff positions to support research) determine the capacity of the library in implementing and maintaining research support services and librarians’ ability to engage in the research process. As pointed out by McBain, Culshaw and Hall (2013), if librarians are eligible for faculty

status they can stand up with researchers as equal partners and get more opportunities to gain firsthand experience on research practice that is invaluable in understanding the needs of researchers. The significance of having positions dedicated exclusively to working with researchers has been pointed out by several authors such as Parker (2012), Mamtora (2011) and Borchert & Young (2010). Appointing individuals with correct skills and experience as Research Librarians is a common practice in some developed countries.

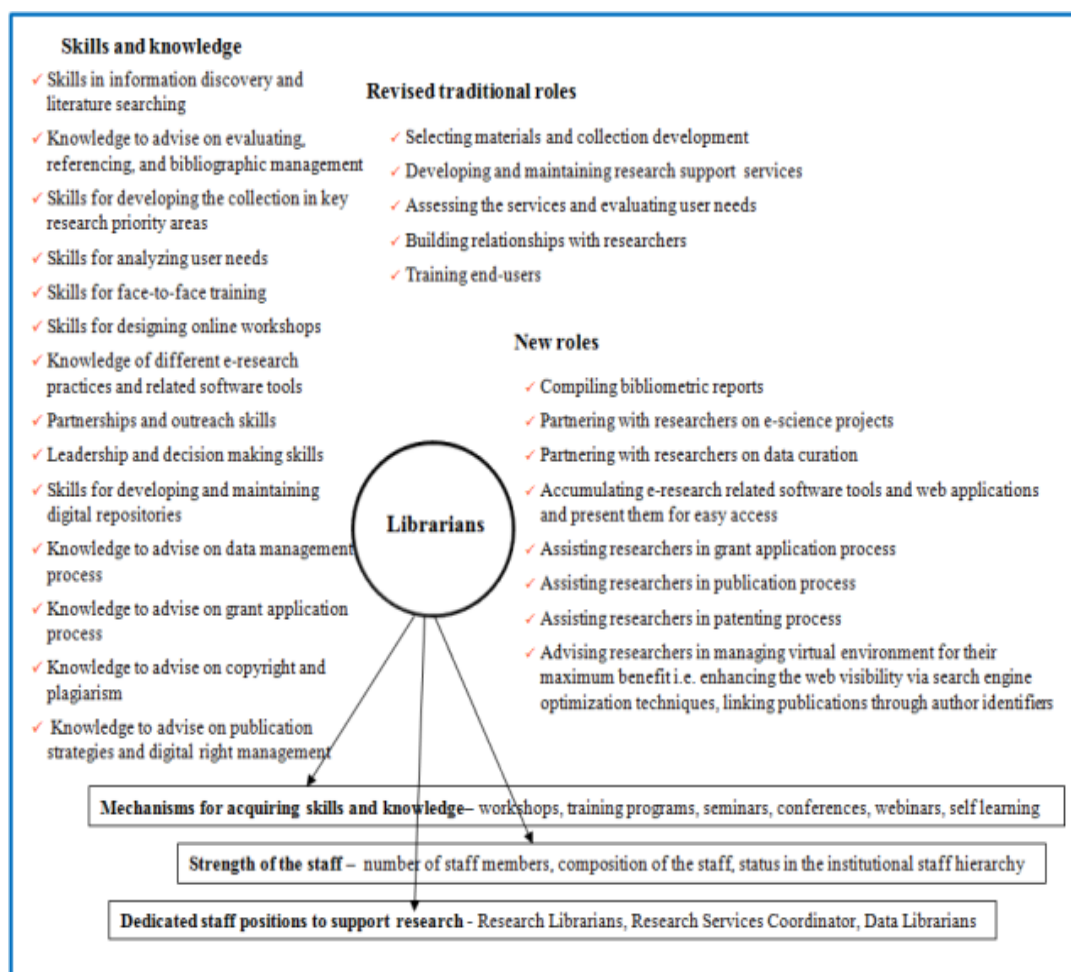


Figure 1: Information Pack for “Librarians”

(b) Researchers

Researchers are the persons who keep the knowledge world alive by producing data sets, knowledge production and patents that enrich the literature and expand the knowledge-base. ‘Nature of the researchers’, ‘Skills and knowledge’, ‘Use of library by researchers’ are the three elements that have been included in the information pack “Researchers”. The Figure 2 illustrates the contents of the information pack.

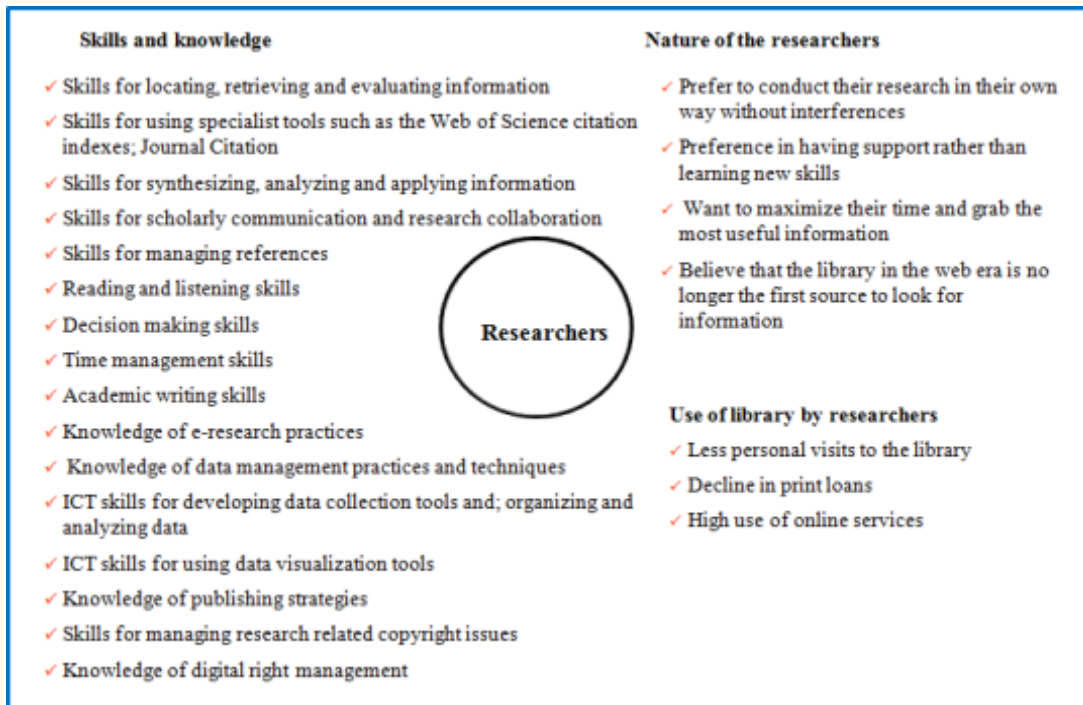


Figure 2: Information Pack for “Researchers”

As Borchert and Callan (2011) have stated, there is a growing literature about the research skills and knowledge required for using e-research or e-science techniques. At the initial stage, 30 items have been listed under the element. Of these, 16 key items were selected to be included to the information pack as shown in the Figure 2. The element ‘Nature of the researchers’ expresses the need of delivering the services in ways that they cause minimum interruptions to the researchers and allow researchers to obtain the maximum outcomes within the shortest possible time. Besides, the element ‘Use of library by researchers’ highlights the fact that librarians should work towards attracting the researchers to the libraries or at least to the virtual interfaces. Without personal or virtual interaction with researchers, it is extremely difficult to enhance the usage of resources and services that have been provided at the expense of huge amounts of money and effort.

(c) Research Support Services

The information pack “Research support services” comprises of five elements, namely, ‘Repackaged traditional library services’, ‘New research support services’, ‘Delivery modes’, ‘Delivery methods’ and ‘Formats of delivering’. In addition to the above five elements, twelve major categories of ‘training packages’ (i.e. one of the items of the element ‘Repackaged traditional library services’) have been included into the pack to illustrate the diversity of training packages that are being delivered in the libraries worldwide. Figure 3 illustrates the contents of the information pack.

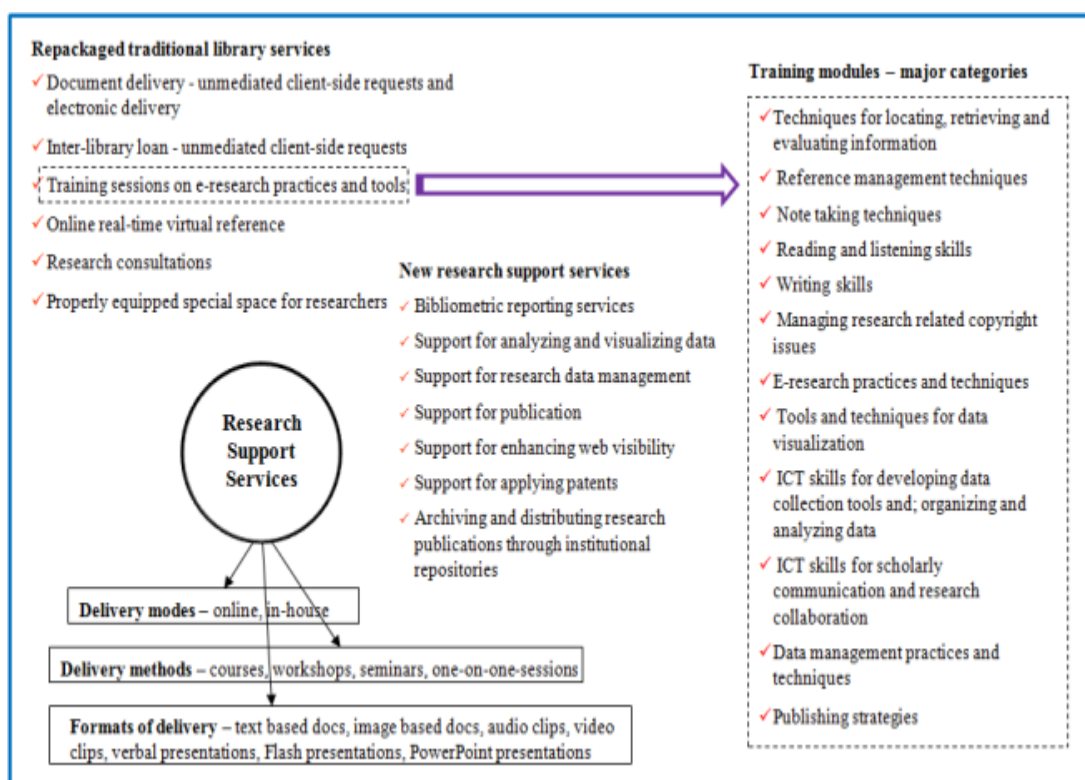


Figure 3: Information Pack for “Research support services”

The research support services in the new era have been extensively discussed in the literature by authors such as Parker (2012), Taha (2012), MacColl and Jubb (2011) and Drummond and Wartho (2009). Besides, numerous examples for e-research support services have appeared in the world-class library websites. Both elements namely, ‘Repackaged traditional library services’ and ‘New research support services’, which consist of five items and seven items respectively are developed based on much longer lists developed at the initial stage. The items have been sorted based on their ability to contribute to the present e-research environment. The effective use of ‘online’ delivery mode is very crucial to accommodate off-site researchers and to facilitate long distance research and cross-institutional research projects. In addition, as Zhao (2009) pointed out, online counterparts of services serve the needs of local researchers who prefer to work at their own pace and time.

(d) Library Collections

The collection is one of the main aspects that determine the capacity of the library in providing an effective service to its clientele. As Noh (2012) declared, there is a close relationship between library resources and academic research achievements. Collection development in the perspective of acquiring high quality research materials has been frequently discussed in the literature under several areas of concern. Out of them, six elements have been selected to compile the information pack on “Library Collection”. The six elements are ‘Material formats’, ‘Documents compiled by librarians’, ‘Materials generated on campus’, ‘Access models’, ‘Acquisition models’ and ‘Accessing tools’. Figure 4 illustrates the contents of the “Library Collection” information pack.

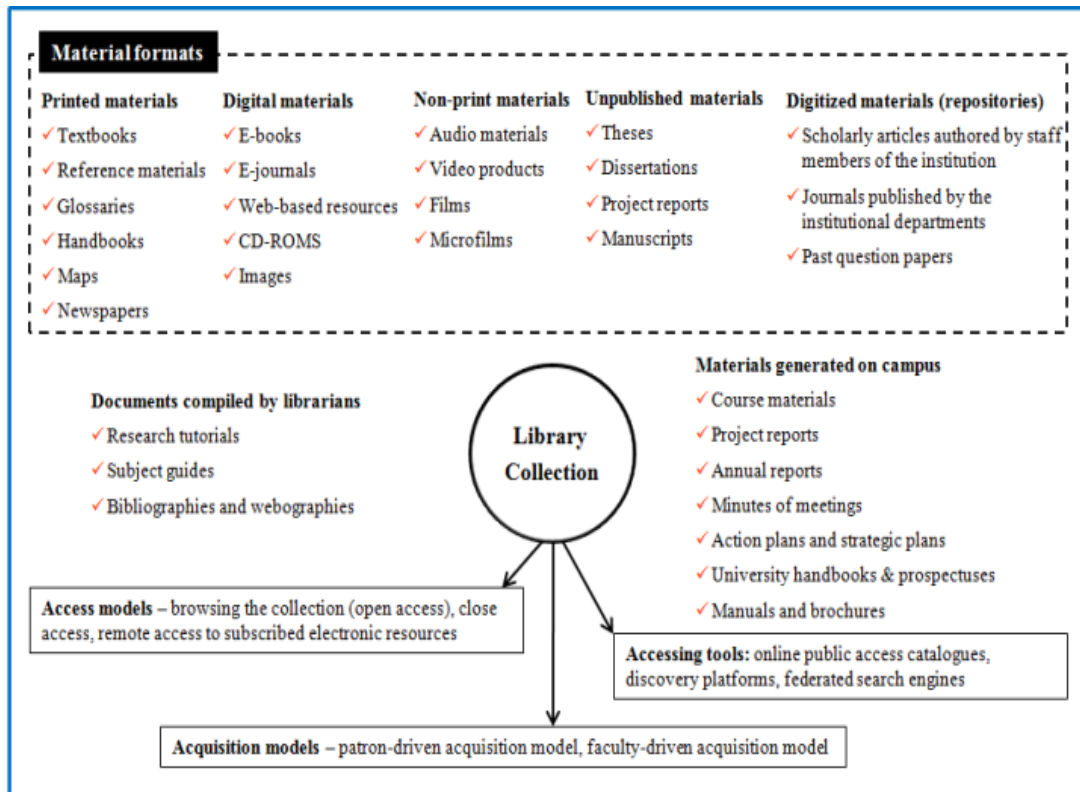


Figure 4: Information Pack “Library Collection”

Five major categories of ‘Material formats’ have been included to illustrate the comprehensiveness and the diversity of the formats of information products available in the current information era. Besides, three items under ‘Documents compiled by librarians’ and seven items under ‘Materials generated on campus’ have been included to demonstrate the diversity of the library collections. All three elements ‘Access models’, ‘Acquisition models’ and ‘Accessing tools’ have been included to the information pack considering their high impact on the usage of the collection. Multiple access models are addressing the needs of on-site and off-site researchers in accessing printed and digital collections, while patron-driven acquisition model enhances the relevancy of the collection to the current user population. New access tools (i.e. online public access catalogues, discovery platforms, federated search engines) allow users to enjoy enhanced searching facilities together with time saving functions such as online reservations and renewals of library materials.

(e) ICT Tools

E-research has come to life through the development of a variety of ICT tools that have significantly changed the face of the research and the researcher. The information pack “ICT Tools” comprises of two elements namely, ‘ICT tools – major categories’ and ‘Types of software tools and web applications’. Figure 5 illustrates the contents of the information pack.

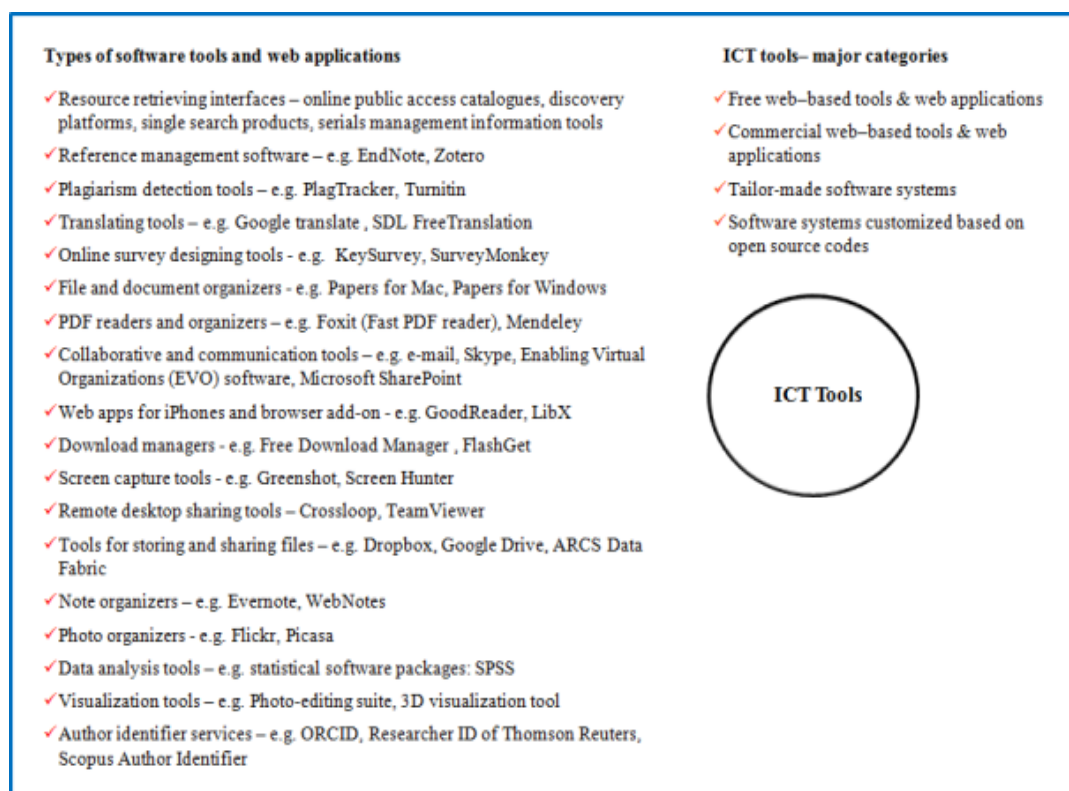


Figure 5: Information Pack for “ICT Tools”

The spectrum of ICT tools used in the e-research process is very broad. In addition to the common set of ICT tools used by the researchers in general, there are types of ICT tools used only by researchers of a particular discipline. In order to simplify the information pack “ICT Tools”, an attempt was taken to summarize the content into two above mentioned elements as shown in Figure 5. Furthermore, 2 or 3 examples have been given for each type of software tools in order to enrich the content of the information pack. These categories, types and examples were extracted from the lengthy lists that were developed at the initial stage.

(f) Institutional Research Infrastructure

Readiness and eagerness of the institution towards accommodating and facilitating research is a key determining factor on the quality and the quantity of the institution’s research output, as well as the productivity and the web visibility of the knowledge products that have been created by its research community. The information pack “Institutional Research Infrastructure” comprises of six elements namely, ‘Specialized divisions’, ‘Dedicated officers’, ‘Governing bodies’; ‘ICT infrastructure’, ‘Financial support’, ‘Policies and guidelines’. Figure 6 illustrates the content of sthe information pack.

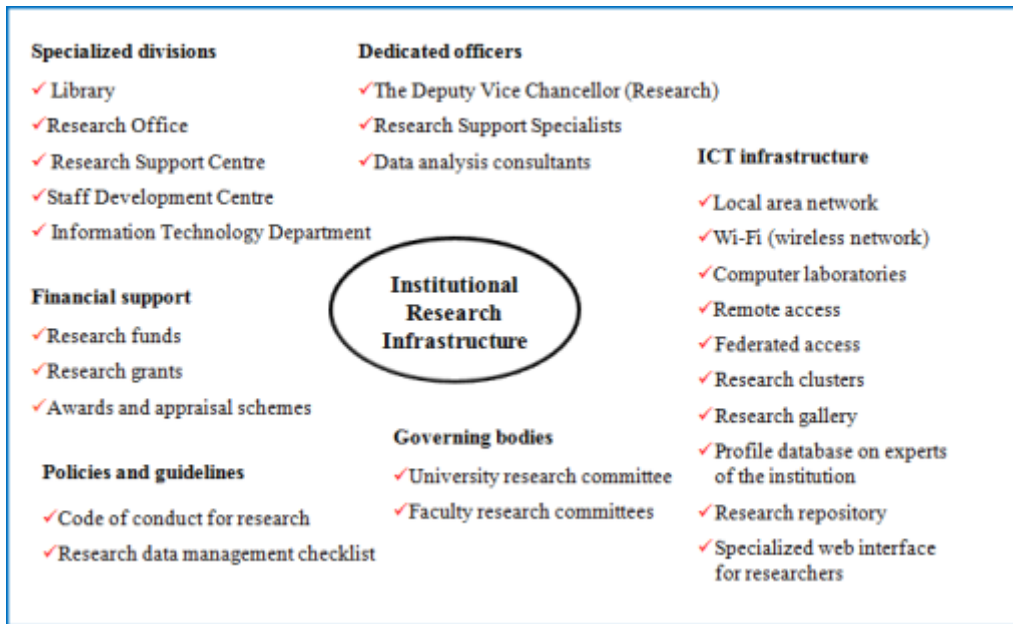


Figure 6: Information Pack for “Institutional Research Infrastructure”

As revealed by the literature and websites, the most common specialized division in the universities, other than the Library, is the ‘Research Office’ that provides training, guidance and counseling for researchers through experts and consultants. In many universities, Information Technology Division too plays a very critical role in supporting research activities in terms of expert knowledge, software and equipment. Libraries worldwide often work collaboratively with these divisions in providing research support services. The 10 items that have been listed under the element ‘ICT infrastructure’ are the key factors that determine the level of richness of the virtual experience provided by the institution to its researchers. ‘Financial support’ motivates the researchers while ‘Policies and guidelines’ guide them to a targeted destination. University authorities should pay a special attention to these two elements if they wish to carry their institution forward as a research institution.

(g) Evaluation and Promotion

The information pack “Evaluation and Promotion” comprises a total of five elements that consist of two evaluation elements (i.e. ‘Evaluation studies – major categories’ and ‘Data collection methods’) and three promotional elements (i.e. ‘Promotional aspects’, ‘Suitable locations for delivering’ and ‘Delivery methods’). Figure 7 illustrates the contents of the information pack.

Evaluation and promotion are two key aspects that are vital for the well-being of any system or process. Nine major categories of evaluation studies and three data collection methods that have been frequently used by the librarians for such evaluation studies have been listed in the information pack in order to assist librarians who need guidance in these aspects. The aim of the 11 items listed under the three promotional elements is also to give directions for librarians in conducting promotional campaigns and awareness programs.

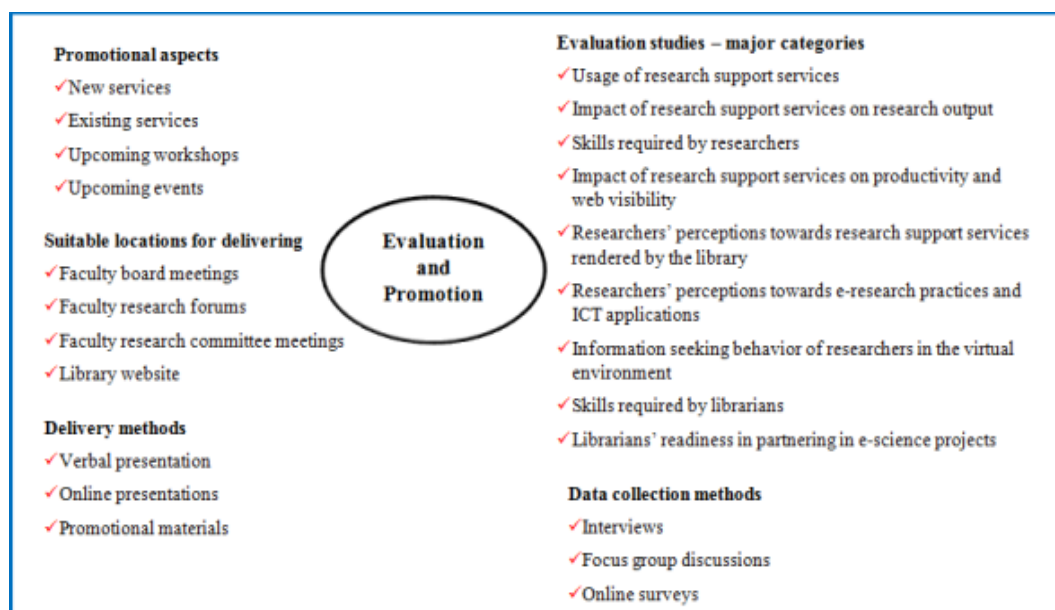


Figure 7: Information Pack for “Evaluation and Promotion”

Framework on global research support environment in the university setup

The proposed framework that illustrates the boundaries and landmarks of global research support environment in the university setup have been developed as a guiding document in assessing current research support services at the OUSL library and in formulating an action plan to extend research support services. The proposed framework that consists of seven modules, 34 elements and 210 items may also be useful for librarians, particularly for those who are not much familiar with the modern e-research environment in their e-research support endeavors. Table 1 presents the outline of the proposed framework.

Table1: Outline of the proposed framework

Modules	No. of elements	No. of items
1. Librarians	6	39
2. Researchers	3	23
3. Research Support Services	6	38
4. Library Collection	6	40
5. ICT Tools	2	22
6. Institutional Infrastructure	6	25
7. Evaluation and Promotion	5	23
Total	34	210

Research support environment at the OUSL Library

The research support environment at the OUSL Library has been assessed in parallel to the seven modules of the proposed framework to identify the areas that should be rectified, enhanced, introduced or further investigated.

(a) Librarians at the OUSL

The OUSL Library network consists of a main library and five regional libraries. A total of nine professional staff members and 20 para-professional staff members are serving in these six libraries. Professional staff members have academic status and hold postgraduate qualifications, including three PhDs. Para-professional members are also placed appropriately in the staff hierarchy and a significant percentage of them possess good educational and professional qualifications.

Librarians at the OUSL Library execute all revised traditional roles and three out of the seven new roles listed in the “Librarians” information pack. The three new roles that are being practiced are accumulating e-research related software tools and web applications and presenting them for easy access, assisting researchers in publication process, and assisting researchers in patenting process.

Professional staff members at the Library participate in seminars and continuous professional development programs, carry out research projects, and practice self-learning techniques in order to upgrade their skills and knowledge. Participating in in-house and outside workshops and following short-term study programs are the main skills and knowledge acquisition techniques popular among para-professional staff members. However, both professional staff and para-professional staff need to go through a thorough uplifting of skills and knowledge, particularly in the areas such as preparing grant applications, designing online workshops, data management and visualization, etc. A set of focus group discussion sessions has been included to this project in order to generate detailed information in this aspect.

A weak point of the OUSL Library in this aspect is the absence of dedicated staff positions for research support. The Senior Assistant Librarian who is in charge of Inquiries and Skills Development Unit manages research support services with the help of two para-professional staff members. Therefore, it is an uphill task to broaden the service component without additional staff. The aim of the Library is to convince the university authorities to generate a new cadre position to appoint a Research Librarian and to allocate more funds to establish a separate division for research support.

(b) Researchers at the OUSL

There are 260 plus academic staff members in the four academic faculties (i.e. Education, Engineering, Humanities and Social Sciences, Natural Sciences) located in the main campus at Nawala and five regional campuses scattered throughout the country. A significant percentage of them are working on research degrees while some of the lecturers are engaged in long term and short-term research projects. Almost all of the senior academic staff members and some junior staff members are supervising research students. The OUSL research community also comprises of nearly 900 postgraduate students who have major research components in their study programs. Hitherto, no study has been carried out to measure the e-research literacy level of the OUSL researchers. However, from the author’s experience with these researchers during the skills training sessions and one-to-one research consultation sessions, it is unlikely that the majority of them possess high level in e-research literacy.

Empirical evidence in the literature on the use of library by researchers suggests that personal visits and use of printed materials is poor while use of online services is high. The author believes that the same is true of OUSL researchers. The average number of books borrowed by the total population of academic staff per month is 200 (approximately) and this number by the total population of postgraduate students is 100 (approximately). Meanwhile, 70% of the requests for document delivery and interlibrary loan are submitted via the online form. Besides, over 90% of the requesters select the option of electronic delivery of documents. No statistics are available to calculate the physical or virtual library visits of researchers. The proposed user survey has a section to assess the library habits of researchers to gain more knowledge in this aspect.

(c) Research Support Services at the OUSL Library

The OUSL Library provides all the six repackaged research support services and four out of the seven new research support services. The four new services are support for publication, support for enhancing web visibility, support for applying patents, and archiving and distributing research publications through institutional repositories. However, except for the repository service, the rest of the three new services are provided only upon request. These three services are yet to be fully implemented and promoted as library services. The Library has a Skills Development Unit and provides a number of training packages for end-users on scheduled basis as well as on request basis. However, when considering the wide-array of skills training packages offered at universities worldwide, the OUSL Library needs to introduce many new training packages to complete the range. The Library offers its services in both modes online and in-house and uses only two delivery modes (i.e. workshops and one-to-one sessions) out of the four delivery modes listed in the “Research Support Services” information pack (Fig. 3). All the delivery formats, except audio clips, are used at the library in delivering these services.

(d) Collection at the OUSL Library

The collection of the OUSL Library is impressive in terms of three elements (i.e. material formats, acquisition models, materials generated on campus) out of the six elements of the “Library Collection” information pack. The OUSL Library collection consists of all the five formats of materials including seven renowned e-journal databases, over hundred thousand books and around 2000 audiovisual materials. The library holds a good collection of campus generated materials and purchases library materials following both acquisition models (i.e. patron-driven acquisition model and faculty-driven acquisition model).

Meanwhile, documents compiled by librarians are limited to a few webographies developed over the years and the library possesses only the online public access catalogue out of the three accessing tools. However, the main weak point of OUSL Library in this aspect lies in the element ‘Access models’. Out of the three access models, the most crucial one (i.e. ‘Remote access to the subscribed electronic resources’) for off-site researchers is unavailable.

(e) ICT Tools at the OUSL Library

The OUSL Library is promoting e-research related software tools and web applications including Zotero reference management software, through the skills training sessions and via the library website. The author developed a FOSS (free and open source software) toolkit for research purposes, which included a range of FOSS applications and free online web services with more than 80 examples. The latest version of the FOSS Toolkit could be downloaded from the OUSL Library website (<http://lib.ou.ac.lk>). However, the Library currently does not subscribe to any commercial applications or web services due to the limited budget allocations.

(f) Research Infrastructure at the OUSL

It is difficult to say if OUSL is in a commendable position in terms of its research infrastructure since it has major weak points in four elements out of the five mentioned in the “Institutional Research Infrastructure” information pack (see Fig. 6). The OUSL does not have remote access and federated access. There are only three divisions (i.e. Library, Information Technology Division and Staff Development Centre) at OUSL, out of the five ‘Specialized divisions’. In addition, there are no dedicated officers or established university level guidelines or policies to promote the research culture at the University. However, the University operates several funding schemes including OUSL Competitive Research Grant and the Faculty Research Grants to financially accommodate the selected research projects.

(g) Evaluation and Promotion at the OUSL Library

The OUSL Library conducts promotional campaigns from time to time on all four promotional aspects listed in the information pack “Evaluation and Promotion” (Fig. 7) using all three delivery methods. However, there is no proper plan or dedicated fund and staff to carry out the promotion on a regular basis. OUSL Library’s performance in terms of conducting evaluation studies is limited to a few ad-hoc small scale studies that were carried out once in a while. The proposed user survey on the usage and user perceptions of the research support services is going to be the most comprehensive evaluation study that will be carried out at the OUSL Library.

CONCLUDING REMARKS

Modern e-research practices have not yet been fully established at the Sri Lankan universities and the whole university system is in a transition period. Under these circumstances, it is time for Sri Lankan academic librarians to come forward to promote the e-research culture in their parent universities through modernizing the research support service component and proposing appropriate infrastructure developments to the university structure.

The objectives of this project focus on developing OUSL towards a model institution with a robust e-research environment. Once it is fully completed, the second phase of the study will produce a set of valuable data to identify the strengths and weaknesses of OUSL system in the context of the benchmarks presented by the proposed global framework. It is expected to use the two documents (i.e. action plan to extend research support services, and strategic plan to build a researcher friendly environment) that will

be developed based on the findings of the phase one and two as guiding tools in achieving the ultimate goal of attracting the attention of the university authorities, and convince them to expand the infrastructure facilities in order to promote the research culture at University level and to allocate funds to expand research support services at the Library.

It is sincerely hoped that the framework on global research support environment in the university setup, inclusive of seven modules 34 elements and 210 items, that has been presented in this paper will shed light on the path of librarians who are struggling to overcome their deficiencies to build up a dynamic e-research support environment in their respective libraries.

REFERENCES

- Borchert, M. and Callan, P.A. 2011. Preparing library staff for research support services at QU. *15th ALIA Information Online Conference and Exhibition*, 1-3 February 2011, Sydney, Australia. Available at: <http://eprints.qut.edu.au/39418/3/c39418.pdf>
- Borchert, M. and Young, J.A. 2010. Coordinated research support services at Queensland University of Technology, Australia. *31st Annual IATUL Conference: The Evolving World of e-Science: Impact and Implications for Science and Technology Libraries*, 20-24 June 2010, Lafayette, Indiana. Available at: <http://eprints.qut.edu.au/33014/>
- Drummond, R. and Wartho, R. 2009. RIMS: the research impact measurement service at the University of New South Wales. *AARL*, 40(2), 76-87.
- MacColl, J. and Jubb, M. 2011. Supporting research: environments, administration and libraries. Available at: www.oclc.org/research/publications/library/2011/2011-10.pdf
- Mamtora, J. 2011. Thinking big picture: meeting the needs of researchers in northern Australia. *Australian Academic & Research Libraries*, 42(2), 88-102, available at: <http://espace.cdu.edu.au/view/cdu:9434>
- Mamtora, J. 2013. *Transforming library research services: towards a collaborative partnership*. *Library Management*, 34(4/5), 352-371.
- McBain, I, Culshaw, H. & Hall, L.W. 2013. *Establishing a culture of research practice in an academic library: an Australian case study*. *Library Management*, 34(6/7), 448-461.
- Noh, Y. 2012. The impact of university library resources on university research achievement outputs. *Aslib Proceedings*, 64(2), 109-133.
- Parker, R. 2012. What the library did next: strengthening our visibility in research support. *16th Biennial VALA Conference and Exhibition*, 6-9 February 2012, Melbourne, Australia. Available at: <http://researchbank.swinburne.edu.au/vital/access/manager/Repository/swin:26132>
- Taha, A. 2012. Networked library services in a research-intensive university. *Electronic Library, The*, 30(6), 844-856.
- Zhao, Y. 2009. Changing of library services under e-research environment. *Electronic Library*, 27(2),342-348.