

# PROCEEDINGS OF 11<sup>TH</sup> INTERNATIONAL CONFERENCE OF UNIVERSITY LIBRARIANS ASSOCIATION OF SRI LANKA - 2021

"Scholarly Publishing & Open Access for the Enhancement of Research Visibility"

Virtual Conference 22<sup>nd</sup> September 2021

# **PROCEEDINGS**



# 11<sup>th</sup> International Conference of University Librarians Association of Sri Lanka -2021

"Scholarly Publishing & Open Access for the Enhancement of Research Visibility"

> 22nd September 2021 (Virtual Conference) University Librarians Association of Sri Lanka

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#### **SPEECH OF THE CHIEF GUEST**

#### **MAJOR GENERAL MP PEIRIS**

RWP RSP VSV USP ndc psc Vice Chancellor General Sir John Kotelawala Defence University



Reverend Sirs,

The President, University Librarians Association of Sri Lanka and the Conference Chair, International Conference of University Librarians Association - ICULA 2021, Dr. Chammika Mallawaarachchi, Acting Librarian of the General Sir John Kotelawala Defence University,

Keynote Speakers,

Mrs. Barbara Lison, President of International Federation of Library Associations and Institutions (IFLA),

Mr. Jeevan Thiaagarajah, Executive Director, Centre for Humanitarian Affairs, Sri Lanka, Dr. Mrs. Pradeepa Wijetunge, Director, National Institute for Library & Information Science, University of Colombo,

Executives and Representatives of the University Librarians Association of Sri Lanka,

Librarians, acting Librarians, and members,

Invitees, Distinguished participants, Ladies and Gentlemen,

Good Morning to all of you!

Let me begin by thanking the University Librarians' Association, especially the President Dr. Chammika Mallawaarachchi and the Executive Committee of the Association for inviting me as the Chief Guest at the International Conference of the University Librarians' Association 2021 organized on the important theme, "Scholarly Publishing & Open Access for the Enhancement of Research Visibility." – a theme I believe is pertinent in many respects.

KDU has been actively supporting the activities of the University Librarians' Association since 2015 when, as the then Vice Chancellor, I got our library staff KDU to get the membership in your Association. And since then, KDU librarians and assistant librarians have been very active members of your Association. I am glad that our present librarian is currently giving the leadership to your Association. And I am happy to speak a few words at this important academic event of yours as we believe that your progression has a direct bearing on the progression of our libraries and of our universities in turn.

Recalling my memories of our school days, generally the impression we had of a library and a librarian, I would say, is not a very positive one. The library was treated as a place of sanctity that children feared to step in. The ghostly silence, the grandiose and closely monitored book racks, the musty smell of old untouched books, and more than everything, the imposing figure of a person called the librarian with an eagle's eyes and a hound's ears – a person who assumed control, authority and 'ownership' over the books as well as of those who worked in the library, and even of the innocent readers who entered there. We, the students, feared the threatening library and preferred the freedom and enjoyment at the playground, which attracted us even during the so called library periods. This is perhaps the story of you, the university librarians today, during your school time. However, I am sure that the university libraries that you manage today are just the contrast. I am sure they operate as the hearts of your universities or higher education institutions that attract students and staff and help them in scholarly work of accumulation, generation and dissemination of knowledge.

Ladies and gentlemen, the history of libraries is reported to run back to more than 5000 years, and as per the available records, it was in South Western Asia or in Mesopotamia that the first known libraries had been established, where inscriptions on clay tablets were displayed for reading. Since then human civilizations have evolved with knowledge being passed down from generation to generation, with libraries of the time contributing to the knowledge dissemination process. Ola leaf inscriptions that predominated in Asia, hand-scribed writings on parchments made of animal skins, and later on parchments made of paper produced during Egyptian, Greek and Roman civilizations are notable aspects in the evolutionary process. It was with William Caxton's introduction of the first printing press in 1476 and the publication of the Gutenberg Bible that hand-scribed books began to be replaced by modern printed books, which enabled the facility for having large number of copies of the same book to be placed on library racks throughout the world.

We, in the 21<sup>st</sup> century today, are rapidly moving into the digital world and have moved into the new paradigm of digital libraries where we can share knowledge through digital means or e-books, e-journals etc. without having to physically visit the libraries that maintain physical repositories arranged in book racks with physical catalogues to facilitate the readers. Instead, e-library facilities are increasingly being used to enhance efficiency in academic and scholarly work. Now the e-library concept has assumed a greater significance in the new normal situation, and even those of us who were rather reluctant to change are now compelled to seek the assistance of e-resources. So, in a way the pandemic has become a blessing in disguise for our progression for the future.

Universities as you know are the places that generate and disseminate new knowledge, and a university library is identified as its heart because it constantly supplies the energy to sustain the mechanism of knowledge accumulation, production and dissemination. Without a sound library system, the body of a university would be similar to that of an ailing, unhealthy person whose heart is extremely weak. So, you as university librarians have a huge responsibility to

provide the best facilities for your clientele, that is the students and academics of your university. It is only then they could function fully in their scholarly activities. You have the dual role of being administrators as well as academics. The constant updating of knowledge and engagement in research in your field is essential to keep your libraries up to date. It is also your responsibility to keep university administrators, academics and students updated and educated on aspects that need enhancement, and in that sense, I believe that an active librarian can be the true agent of change in a university.

Ladies and gentlemen, as much as the library is the heart of a university, I believe that the university is the heart of a nation, and a nation with a weak tertiary education system will never achieve its desired developmental goals. In other words, the future of a nation largely depends on how best its university system produces intellectuals, intellectually potent professionals and leaders for the nation. It is generally believed that the independence of a nation would depend largely on its economic strength and sustainability, but in an era in which we talk of a knowledge economy, the success of a nation will depend largely on knowledge generation through research. So the amount of meaningful and productive research conducted and facilitated by university scholars in diverse fields, perhaps in collaboration with professionals in the industry, will collectively support the development and elevation of a nation altogether.

Ladies and gentlemen, I believe that the university ranking is an index that indicates where we stand in terms of generation of new knowledge. We in Sri Lanka should seriously address this issue and realistically look at our status in the world university ranking and what our problems are. As a Vice Chancellor of a university that aspires to constantly introduce meaningful and progressive changes in the university to enhance its recognition in the global university ranking through facilitation for research, I find that the theme of your conference is very significant. And if and when we reach internationally acceptable levels of recognition, Sri Lankan Universities would be able to attract foreign students thus enabling the country to earn foreign exchange through education. A cynic may argue how could we do that when we cannot even accommodate local students in our universities, but I believe that given the proper leadership and proper orientation, Sri Lanka can achieve such targets in the future. What we need is positive thinking intellectuals to take the lead.

The choice of the theme, "scholarly publishing and open access for enhancement of research visibility", indicates your willingness to take leadership in positive directions and your awareness of the importance of not only research and scholarly publications but also of the visibility of research. I think your deliberations under this theme would themselves end up in scholarly publications and practical solutions to resolve stumbling blocks in our systems.

We need to understand that emphasis in our universities for quality research is comparatively less, of course due to diverse reasons. And even the limited research findings available get limited to unpublished theses and dissertations carefully maintained in library racks in universities, and thus comes the question of their visibility. So not only should we facilitate for scholarly work of high standing, but we also need to facilitate for the visibility of such research

so that other researchers would read them and cite them in their own research thus increasing the citations of a researcher, which in turn encourages further research through recognition in his or her discipline. That is where our scholars can earn a name in their specific disciplinary domains assuming prominence in the business of knowledge generation.

We know that many of our scientists, academics and scholars leave for greener pastures in powerful countries especially in the west, and some of them have earned name and fame and introduced many new innovations to the world. But the question is why they cannot do the same being in the country. One main problematic area is the unavailability of access to good journals and data bases that contain latest research findings in the world. I believe that the university libraries need to be proactive in finding possibilities and resources available and creating awareness among academics and students, which will definitely encourage them to conduct meaningful research and propagate such knowledge through indexed and peer reviewed journals of high acceptability.

Open Access (OA) has been defined as "a means of disseminating scholarly and scientific literature over the internet free of charge to researchers and to anyone else who might benefit from accessing the results of publicly funded research". However, I believe that you, the librarians need to find out how open they are – the degree to which a so called open access journal is actually open for readers need to be found out. We need to realize that scholarly publication is also a part of international business. And it is the responsibility of librarians to research into this aspect too so that they can make their clientele educated on getting the best use from open access publications. We at KDU give the highest priority for providing the necessary infrastructure both physical and digital, provided we are convinced that such investment would be worthwhile for the progression of our university through positive outcomes.

So let me conclude my expression of thoughts wishing you all the best in your deliberations that will enhance your horizons in the discipline of library science so that you could contribute more towards your respective universities to engage in the role and task of not only producing graduates but more importantly of enhancing scholarly work that will elevate our universities to a higher level in the world university ranking. Let us hope that librarians, academics, administrators and students of universities in Sri Lanka look at the modern problems in higher education in a more holistic and rational way to move with the rapidly changing world so that we all could contribute to the betterment of our nation and that of the humanity at large.

I thank you.

MAJOR GENERAL MP PEIRIS Vice Chancellor General Sir John Kotelawala Defence University

#### MESSAGE FROM THE CONFERENCE CHAIR

**DR. C MALLAWAARACHCHI**Conference Chair & President, ULA
Acting Librarian
General Sir John Kotelawala Defence University



It is a great pleasure to welcome you all to the International Conference of University Librarians Association – ICULA 2021.

This is a truly unique platform for us to come together and shape the future in scholarly research, publications and to enhance their visibility.

First and foremost, let me very warmly welcome our chief guest, Major General Milinda Peries, Vice Chancellor of the General Sir John Kotelawala Defence University for very kindly accepting our invitation and for gracing this occasion as the chief guest of ICULA - 2021.

I consider your presence, as one of the most legendary Officers in Defence, the Vice Chancellor and a scholar, as a great honour to the University Librarians Association of Sri Lanka.

I warmly welcome our keynote speaker, Mrs. Barbara Lison, President of the International Federation of Library Associations and Institutions. It is a prodigious integrity to ULASL, you are delivering a keynote speech at ICULA-2021.

Also, I welcome Mr. Jeevan Thaigaraja, Executive Director, Center for Humanitarian Affairs, Sri Lanka. It is a great pleasure to ULA, your presence as a keynote speaker here today to color the ICULA-2021.

Then I welcome Dr. Mrs. Pradeepa Wijetunga, the Director, National Institute of Library and Information Science, who is having a very close affinity with ULA as an illustrious member of our Professional association.

This year's theme of ICULA 'Scholarly Publishing & Open Access for the Enhancement of Research Visibility' highlights the importance of scholarly works where all of us engaging in and their visibility and access for enhancement of knowledge. In the last few years, we have heard the terms: fake news, disinformation, misinformation, repeatedly. Yet, we do not know how to be better informed, fight this phenomenon or train people in combating it. With a vast majority of the population relatively new to technology, and not trained in any formal way to decipher the real from unreal, truth from half-truths and lies, people end up believing disinformation as truth, especially when there is enough repetition.

ICULA 2021 may bring new insights to this phenomenon and its implications, the current efforts and their degrees of success, and provide directions for information professionals on the importance of scholarly publishing and research visibility to fight against disinformation and simulated knowledge.

ICULA 2021 is taking place here in Colombo, Sri Lanka amidst very challenging circumstances, however, it becomes a significant event of the University Librarians Association of Sri Lanka in terms of its resolution to ensure the continuity of ICULA even under the most trying circumstances.

ICULA has been attracting local and foreign presenters, participants and distinguished scholars and professionals in the field of Library and Information Science both locally and internationally since 2005. However, this year, the COVID 19 pandemic situation has restricted having them physically present here in Colombo, Sri Lanka. But many of our invitees join us on a virtual platform.

I am very enthusiastic and it will be great to hear from our keynote speakers about the influence, priorities, development and comparison to international trends in scholarly publishing and research visibility. Also, from paper presenters' novel and innovative knowledge, practices and experiences in the same field were very significant now. At last but not least I warmly welcome all the paper presenters, ULA members, local as well as international participants for the conference. You are a very valuable asset for the ICULA/2021, without you not the event is success.

May I conclude, ICULA 2021 has been recognized as an academic event nationally and internationally to establish and strengthen research culture.

I wish you all a happy and successful conference.

Thank you.

Dr. Chammika Mallawaarachchi Conference Chair, ICULA 2021

#### MESSAGE FROM THE CONFERENCE SECRETARY

**DR. MM MASHROOFA**Senior Assistant Librarian
South Eastern University of Sri Lanka



I take great pleasure in extending these greetings in my capacity as Secretary of the International Conference of University Librarians Association (ICULA) to all the guests and participants of this event. The virtual conference that is organized by the University Librarians Association of Sri Lanka (ULA) will be held on 22 September 2021. I appreciate the effort put in by the ICULA 2021 committee to hold this conference amidst many challenges posed by the fourth wave of the COVID-19 pandemic. I congratulate the Conference Chair, Co-chairs, Co-secretaries and technical committee members of ICULA 2021 for all the trouble they have taken to conduct this program successfully.

The theme of ICULA 2021 addresses a very pertinent and timely topic, which is "Scholarly Publishing and Open Access to Enhance Research Visibility." The keywords scholarly publishing, open access and research visibility are the prominent and crucial aspects of knowledge dissemination that must be considered by academic librarians and other library practitioners. This is particularly relevant now as the pandemic and the ensuing lockdowns are forcing us to develop these three aspects in order to provide library support services to remote users, to enable them to access scholarly information for teaching, learning, and research purposes from vast repositories of knowledge.

The Chief Guest, Major General MP Peiris RWP RSP VSV USP, Vice Chancellor of General Sir John Kotelawala Defence University will grace the occasion and address the gathering. The keynote speakers, Ms. Barbara Lison, President, International Federation of Library Associations & Institutions (IFLA), Mr. Jeevan Thiagarajah, Chairman, Centre for Humanitarian Affairs, and Dr. (Mrs) Pradeepa Wijetunge, Director, National Institute of Library and Information Sciences, University of Colombo, Sri Lanka will deliver the keynote addresses. Thirteen research papers by local and international researchers will be presented. Following the technical session, a plenary session will be held with three eminent scholars in the field of Library & Information Science.

I express my heartfelt gratitude to the Chief Guest, keynote speakers, paper presenters, plenary speakers, conference committee members and the executive committee members of ULA for the valuable contributions they have made to make this event a great success.

I take this opportunity to wish all the paper presenters and participants a rewarding and pleasant experience.

Thank you.

Dr. M.M. Mashroofa Secretary, ICULA 2021

#### **KEYNOTE SPEECH (ABSTRACT)**

#### MRS. BARBARA LISON

President
International Federation of Library Associations & Institutions (IFLA)



IFLA, International Federation of Library Associations and Institutions, is the global voice for libraries! The federation supports the professional development of libraries worldwide and is also an actor for advocacy for libraries in the international field. Especially in the last five years, IFLA has developed a higher impact for the political acknowledgment of the libraries and their services towards research and academia as well as for the library services to the general public. In her speech, IFLA President Barbara Lison will report about the latest developments to the benefits of the libraries and the librarians to serve their clients and users.

#### **KEYNOTE SPEECH**

#### MR. JEEVAN THIAGARAJAH

Chairman

Center for Humanitarian Affairs (Gte) Limited No. 15/5, Victoria Place, Colombo 08, Sri Lanka



Open Access (OA) enables individuals to freely access the complete text of an academic journal without the need for a subscription, payment, or registration. This essentially means that anyone with Internet access, regardless of whether you're in academia or not, is just one mouse-click away from obtaining a reference or scouring through the academic literature.

When discussing OA, predatory journals have often taken centre-stage which diverts focus away from the beneficial aspects of OA not just to those in academia but to the broader public as well.

Let's take a look at the impact on academics first. Open access publishing grants authors with more visibility as more people can read their work and download the articles as PDFs. Usually, researchers can easily access articles relating to their field of work through their libraries yet it's harder for them to find literature relating to other areas unless they obtain tedious interlibrary loans. Universal open access will enable researchers to transcend this barrier and save time when finding articles; this is especially useful because they have to scour through hundreds or even thousands of references every year so every second counts. This could be especially important in Sri Lanka as there is a funding discrepancy when compared to the West where researchers have access to well-funded libraries. Our researchers can gain access to a wealth of information and promote their work if they support open access publishing. Importantly then, researchers could gain access to ground-breaking findings from other disciplines which could promote collaboration between fields and heighten the mutual appreciation between academics.

Academics make up a small portion of the population yet Open Access publishing can have impacts on the laymen too. Granting more open access options to the public will allow them to gain valuable information particularly with regard to health that they could use in conjunction with professional advice to complement their treatment programs. This will provide the public with more agency and could incentivize them to take a more proactive role in their healing/educational process. More importantly, in this COVID era, access to reputed scientific journals could combat the insidious impacts of fake news that is prevalent on so many social media platforms. Public with access to reputable journals will be able to correct mistakes and protect themselves from falling prey to incorrect and outdated information.

However, one cannot forget about the pitfalls of OA when discussing this topic. Firstly, the predatory journal publishers do lurk on the internet, offering researchers false promises such as the unregulated access to competent peer review processes and a place on supposedly reputable platforms. In the same vein, the public might find it difficult to disseminate between credible sources and unreliable articles in predatory journals which may have been marketed well. This could result in the public coming to false conclusions and using social media to spread that incorrect information. It is a double-edged sword.

With regard to the economic component of OA in the Sri Lankan context, publishing process fees acts as a deterrent as the lack of funding in research domains is quite evident. This contributes to the Western bias in journal content as Westerners have funds to privately publish articles in an Open-Access format.

That being said, there are several measures that can be taken to combat predatory publishing and promote the sustainable use of Open Access publishing. There is no better way to facilitate change than to include those who are most passionate about it. Given that there are multiple stakeholders, the logical route would be to organize collaborative efforts between them to promote open-access publishing. In particular, there should be cooperation between research funders, universities, major publishers, and local libraries. This collaboration should ideally lead to the establishment of a regulatory body that oversees the sustainable, reputable publishing of open-access articles and cracks down on any and all predatory journals within the country. Additionally, a "whitelist" of accepted journals could be drawn up to help researchers disseminate between quality journals and unreliable ones. At the same time, funders should pledge to only support high-quality journals that are committed to ethical research processes. In the same vein, despite the allure of gaining research exposure, those in academia should reject offers to publish in fraudulent journals and refuse to accept offers of board membership and gift editorship.

Universities can create mandates asserting that faculty members must make OA versions of their articles. Again, as funding seems to be the big issue with regard to OA publishing, universities could seek to work with other research institutions to create proposals for external funding. This is easier said than done but collaborative efforts will have a much higher chance of success than individual efforts to promote OA publishing.

With regard to the public recipients of OA articles, there should be efforts to educate the public on how to critically analyse articles and differentiate reliable articles from unreliable, biased fluff. This can be organized via nation-wide campaigns by passionate individuals as everyone could benefit from this form of education- particularly the ability to use information from research articles while individually evaluating the merit of those articles instead of spreading fake news.

All these potential solutions may seem overwhelming, but it can be explored incrementally in order to facilitate change. The crux of the matter is that OA publishing has an impact that

stretches beyond academia and deserves to be taken seriously. In the words of Benjamin Franklin, "an investment in knowledge pays the best interest". The possibilities are endless.

(Researched & Written by Sikhandi Thiagarajah)

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#### **KEYNOTE SPEECH**

#### DR. (MRS.) PRADEEPA WIJETUNGE

Director
National Institute of Library & Information Science
University of Colombo, Sri Lanka



## SCHOLARLY PUBLISHING & OPEN ACCESS FOR THE ENHANCEMENT OF RESEARCH VISIBILITY

The central theme of this conference deals with three very significant concepts for the academia: Scholarly publishing, open access and research visibility. I want to draw your attention first to scholarly publishing and then to the open-access movement, briefly

Scholarly publishing, as we commonly understand, are the publications related to the academic disciplines, written by the scholars of that discipline and reviewed by their peers before getting published. A scholar is defined by Boyer<sup>i</sup> by moving away from the linear approach that has often characterized the faculty members either as researchers or teachers. He argues that scholarship has four elements; the scholarship of discovery, the scholarship of integration, the scholarship of application and the scholarship of teaching and that these four aspects dynamically interact, forming an independent whole.

It is interesting to question why do scholars want to publish? On a more practical note, scholarly publications are needed for recruitment and promotions at the beginning of a young scholar's career. On a more qualitative note, when they move up in the career ladder, it is mainly to disseminate their research findings, but not with the sole objective of dissemination. Scholars expect professional recognition and esteem in their sphere and from their periphery by publishing. They wish to build up their reputation. They also expect their publishing reputation to bring many other opportunities like research grants, collaborations, consultancies, fellowships, and invitations to speak at conferences and symposia and the like. In short, scholars publish not just to disseminate their research findings but also to achieve their aspirations and to reflect their behaviour. The types of scholarly publications vary from monographs, journal articles, conference abstracts and papers, editorials and review papers and the like. However, the journal article seems to be the most popular type among many scholars.

The beginning of scholarly journal publishing dates back to 1665 when Henry Oldenburg created the world's first research journal, "*Philosophical Transactions*", as part of his responsibilities as a Joint Secretary of the newly founded Royal Society of London. He was compelled to create this journal to address the issues faced by the early scientists, primarily to protect their position as the first discoverer of a concept or research findings.<sup>iii</sup>

Scholarly journal publishing experienced rapid growth during 1945-1970 periodiv due to

increased research funding, especially after World War II. In 1964, the Science Citation Index introduced Journal Rankings and Impact Factor (JIF) metrics to rank the proliferating journals. During the **1971-1995** period<sup>vi</sup>, with the rapid multiplication of scholarly journals, the prices of the journals started escalating. The consolidation of the publishing industry, the high cost of academic journals, and new journal pricing models created the "scholarly communication crisis" phenomenon, which significantly reduced libraries' buying power and impeded access to knowledge. During the **1996-2004** period.<sup>vi</sup>, the potential of the Internet and the scholarly communication crisis led to the emergence of a new digital age. Publishers introduced the "Bundling" of journals, for which they offered discounts. The libraries were further affected as they were compelled to subscribe to some journals, included in these bundles though they had no use of them. As a consequence of these challenges, the Open Access movement was beginning to emerge.

#### **Beginning of OA movement**

However, the concept of free access to knowledge existed long before it became famous as "Open Access". For instance, Mahatma Gandhi's *Hind Swaraj* published in Gujarati in 1909 (which is recognised as the intellectual blueprint of India's freedom movement), was translated into English the following year, with a copyright statement that stated: "No Rights Reserved." vii

The term "open access" in its modern sense was first formulated in three public statements in the 2000s: the *Budapest Conference on Open Access* in February 2002, followed by the *Bethesda Statement on open access publishing* in June 2003 and the *Berlin Declaration on Open Access to Scientific and Humanitarian Knowledge* in October 2003. In 2001, in the United States, the Creative Commons (Non-Profit Organization) developed the first version of licenses for materials placed in open access. A unique characteristic of open access publishing is that the author or an organisation has to bear the cost of publishing as Article Processing Charge (APC) so that the readers get free access. At present, we can see several types of Open Access models: Gold, Green, Diamond (Platinum), and Bronze. The scholarly journals have three different publishing models: the subscription-based, Open Access and hybrid model.

There is no argument that the Open Access publishing model has significantly impacted accessibility to research findings. Especially when the subscription model prevents many readers from accessing the vital information they need, the open-access model has enabled stress-free and cost-free access to published research findings.

However, open access movement is not absent of many reservations. A primary concern is about the peer-review process. The publication quality is questioned in contrast to the high impact journals. The OA journals with a relatively new beginning are yet to gain high impact and prestige. Further, the undervaluing of OA publications by the educational authorities, the reluctance of faculty to publish in OA journals due to their inadequate recognition, the need for authors to pay the high APCs, and the failure of many institutions to support APCs are some concerns. The connection of predatory journals with open access publishing is a principal concern of academia.

Predatory journals and publishers

"... are entities that prioritise self-interest at the expense of scholarship and are characterised by false or misleading information, deviation from best editorial and publication practices, a lack of transparency, and/or the use of aggressive and indiscriminate solicitation practices." ix

Jeffrey Beall accuses that the predatory journals are corrupting and exploiting open access, especially when authors pay. According to Beall,

"These predatory publishers are dishonest and lack transparency. They aim to dupe researchers, especially those inexperienced in scholarly communication. They set up websites that closely resemble those of legitimate online publishers and publish journals of questionable and downright low quality." ix

In a landscape where the researchers are expected to engage in scholarly publishing without falling prey to the flourishing predators, let me draw your attention to the third concept of this conference theme, increasing the visibility of research and publications.

#### **Increasing Visibility**

Why do we have to be concerned about the visibility of our research? We engage in research, then publish the findings in high impact journals and meticulously update our CVs with the list of publications. We achieve promotions, new positions, research awards, more opportunities, basically esteem, reputation and recognition based on our research and publications. Is that all? Is that the end? Do we fulfil our academic and social responsibility with that? No! Our role does not end with self-actualisation. We do have an obligation to the funding agencies to translate the financial value into benefits for the society. The research findings rarely reach the policymakers, political and community leaders, entrepreneurs, or the general public. It is said that "It takes 17 years for just 14% of medical research to be implemented into everyday practicexi. Often, the new knowledge generated by research ends up on library shelves, institutional repositories or in scholarly publications without adequate exposure. This disconnection between the research findings and the change of practices is called the knowledge translation gap. There are several reasons for this knowledge translation gap:

- Research studies are often complicated
- They do not target the general audiences who need shorter, more straightforward and easily digestible summaries;
- Scholarly articles are read, only by a smaller number of people, mainly researchers;
- Articles are not freely accessible to many.

This is where we must take research visibility seriously. The authors have to go beyond publishing and increase the visibility of their research so that the findings reach all target groups. We need to translate our scholarly publications into formats that diverse social groups can comprehend and appreciate. In addition to the scholarly publications, the authors need to

publicise the research findings and projects through various formats like infographics, visual abstracts, video abstracts, podcasts, and short videos across different platforms, including social media like Facebook, Twitter and Instagram. Academic Search Engine Optimisation is now being used to increase the visibility of research papers across the Internet.

Enhancing the visibility of scholarly publications will positively affect their impact since visibility will lead more readers to the publications, which will lead many of them to cite them in their work. The impact of research draws considerable attention from all stakeholders in academia and the international ranking agencies. The increased visibility of individual research will lead to the increased impact of individual research, which will strongly underpin the impact at an institutional level. The impact of research is measured at three levels; Author level, article-Level and journal level. The measurements used are the conventional bibliometric ones as well as Altmetric ones. Due to time limitations, I do not expect to elaborate on these methods.

#### **Conclusion**

In concluding my address, I want to highlight that scholarly publications will originate only from scholars who form an independent whole by the interaction of Boyer's four elements: discovery, integration, application, and teaching. Open Access can be a double-edged sword. On the one hand, if handled correctly, ethically, and morally with good peer review, it provides many publishing opportunities for emerging young scholars. On the other hand, it can entice the naïve researcher towards data fabrication, data falsification, plagiarizing, salami slicing and similar fraudulent research practices. There are possibilities for many to be allured by the predatory publishers who would promise rapid output albeit minus high-quality peer review. The situation will be further muddled when such publications in the guise of scholarly products are publicized through social media for the sake of visibility. The peer-produced "WoW" factor will mislead such authors, ignorant of the difference between genuine and pseudo-intellectuals. Instead of reputation, recognition and esteem, the visibility of such unethical, predatory or pseudo publications will bring only humiliation, disgrace, scorn and penalties. Though policies, guidelines, and type of penalties are not well established at present, the individual universities, University Grants Commission, respective Standing Committees, CVCD and many other entities are actively engaged in formulating preventive policies to stop fraudulent research and publications. Therefore, I conclude with an appeal to the ULA membership to be well aware of the positive as well as negative aspects of open access, measures adopted to increase research visibility and impact and do not fall prey to predatory or vanity publishers.

Thank you for your attention.

I wish all of you a very successful academic session.

Pradeepa Wijetunge PhD 22.09.2021

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#### **EDITOR'S NOTE**

MRS. K. H. THUSHARA ABEYSEKERA Senior Assistant Librarian The Open University of Sri Lanka



This volume presents the proceedings of the 11<sup>th</sup> annual International Conference of the University Librarians' Association of Sri Lanka, which is published as an e-version. ICULA 2021 takes place online due to the pandemic situation worldwide.

The conference is dedicated to the theme "Scholarly Publishing & Open Access for the Enhancement of Research Visibility", and proceedings mainly present here are scholarly work related to the theme. All the papers, including the extended abstracts, were subjected to the peer-reviewing process to ensure the high quality of this scholarly publication.

Publishing the proceedings of a conference is not an easy task. It takes the time and energy of a team of dedicated members. As such, I take this opportunity to thank all the ICULA 2021 Publication Committee members and the Panel of Reviewers who worked tirelessly to achieve the target within a short period of time. My gratitude is extended to the Conference Committee and the Web and Technical Committee as well.

We welcome all the participants and the presenters to the ICULA 2021.

K. H. Thushara Abeysekera Editor-in-Chief ICULA 2021

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## UTILIZATION OF OPEN ACCESS RESOURCES AMONG THE ACADEMIC STAFF AT SOUTH EASTERN UNIVERSITY OF SRI LANKA: A CASE STUDY

S. L. M. Sajeer\*

Senior Assistant Librarian, South Eastern University of Sri Lanka, Oluvil, Sri Lanka sajeer.slm@seu.ac.lk

A.M. Nahfees

Senior Assistant Librarian, South Eastern University of Sri Lanka, Oluvil, Sri Lanka nahfees@seu.ac.lk

B. E. S. Bandara

Assistant Librarian, South Eastern University of Sri Lanka, Oluvil, Sri Lanka esbandara@seu.ac.lk

#### Abstract

This article aims to provide an overview of Open Access (OA) resources and its utilization by the academic staff at South Eastern University of Sri Lanka (SEUSL) and the level of growth of OA resources. The concept of OA has been greatly developed globally, and these benefits have prompted researchers to change their academic communication practices. The data was collected using questionnaires. The population of this study was 210 staff members and 136 staff members were selected as the research sample data for analysis using stratified random sampling technique. Used SPSS version (23) to analyze the data to examine the tools used to get awareness on OA Resources by research scholars. The majority of the respondents have used OA resources for academic-related activities and found utilization of OA are to be very encouraging. The studies found the OA resources that are accessed online have been well utilized. The use of academic social networking sites, OA journals, e-books, online lecture videos, etc. is very encouraging. Similarly, universities and research institutions can formulate OA policies, establish institutional knowledge bases, and encourage the publication of articles in OA journals and archive them in digital knowledge bases for future development and research. In addition, this will help librarians to make strategic decisions for the development of open science. This study recommends conducting exploratory research to identify university communities.

**Keywords:** Academic staff, Open Access (OA), South Eastern University of Sri Lanka (SEUSL)

\*Corresponding author Abstract No. ICULA2021 S3

#### Introduction

The concept of Open Access (OA) in academic publications has become a common expression in academic discourse due to its practicality. OA is a relatively new method of providing information through electronic journals and other resources. Once academic literature enters the OA field, it can be freely available for the public to read, download, copy, distribute, print, search or link to the full text of the article on the Internet. Readers can freely use OA projects for any legal purpose without financial, legal or technical obstacles. Before the advent of OA, printed journals were the norm in libraries, but many libraries in Sri Lanka burdened with high subscription rates.

Academic publishing is changing rapidly, and it is characterized by the deployment of a large number of environments, forms, models, practices, and sports to bring a series of information resources to direct users for free. One of the movements is OA and Giarlo (2013), explained that OA is used to describe a model of academic communication in which users can freely view, download, copy and print academic articles, books, conference records etc. This means that users can freely access academic materials because the publication is undertaken by another party, usually the author, the author's institution, or the funding agency. According to Aliyu & Mohammed (2014) and Jain (2012) the development of the OA model occurred due to the increased the cost of publishing and the prices of published academic journals by commercial publishers. OA resources are the resources that anyone can obtain and use without restriction at any time. Therefore, it was intended to assess the influence level of OA resources on the academic staff of the selected institutions in the SEUSL.

#### **Problem statement**

Emergence of ICT has affected all walks of life. Every industry relies on the Internet to share information and make it visible through internal and external communication. Educational institutions mainly invest in knowledge resources, which are kept in libraries based on budget availability. Each institution does not get the same amount of budget. Through these budgets, the library cannot obtain all the resources needed by stakeholders and fully satisfy them. In order to eliminate such barriers and discrimination, publishers and Knowledge creation institutions have introduced an OA policy to make academic literature freely available through the Internet. Although academic literature is accessible freely online, many research reports say that the utilization rate of these resources has not met expectations. Therefore, it aims to assess the level of utilization of OA resources for research purposes.

#### **Objectives**

The Objective of the research is as follows:

- To discover the purpose of using open access resources in SEUSL academia
- To identify the problems associated with the use of open access resources

 To examine the tools used to get awareness on open access resources by research scholars

#### Literature Review

Suber (2004), defined as "open access literature is digital, online, free and unaffected by most copyright and licensing restrictions. It is the Internet and the consent of the author or copyright owner that makes it possible". A study by Obuh et al (2012). Noted the high level of use of OA resources by library and information science (LIS) lecturers in Southern Nigeria. Study conducted by Nelson (2014), on the knowledge and use of electronic journals by faculty members showed that faculty members are willing to use the electronic resources provided, they understand these resources and teach how to use them. Mashroofa and Seneviratne (2016), conducted research on Sri Lanka's OA program and institutional repository, and they analyzed the status quo of OA in Sri Lanka. Many universities have established electronic knowledge bases to provide OA to their institutional research papers. Mashroofa, (2015), conducted research on OA academic publishing in Sri Lanka, and authorized to demonstrate paradigm shifts in academic exchange practices.

#### Methodology

The research was conducted among academic staff of the SEUSL. The researchers used Krejcie & Morgan (1970) table to determine the sample size. South Eastern University of Sri Lanka, composes of its academic programs under six faculties thorough, the data was collected from a representative sample of 136 faculty members in all departments using a stratified random sampling technique, and the study population was 210 members of the University. Questions were designed for academic staff to understand their experience in OA and Internet use for study and research work. The questionnaire survey method was staff analyzed the collected data and present it in tabular form.

#### **Results and Discussion**

This contains the key findings, results, and discussion based on the objectives and research questions. Table 1 shows the demography of respondents and 70.59% of respondents were male and 29.41% were female. The reason for this discrepancy is not known, though it could be assumed either that fewer numbers of female faculty members are involved in OA education or that they were not interested in participating in this survey. Hence, one should infer that the results of this study pertain primarily to male respondents.

The researcher obtained various findings which amounted to the objectives being analyzed. The findings have provided the researchers, academic staff, and administration of SEUSL with valuable information about the OA resources opportunities and challenges.

Table 1: Demography of respondents

Gender	No of respondent	%
Male	96	70.59
Female	40	29.41
Total	136	100

Table 2 shows academic rank of 136 respondents.

Table 2: Academic Rank of participants

Academic Rank	No of respondent	%
Bachelor	37	27.2
Masters	54	39.73
Doctorate	32	23.52
Professor	13	9.55
Total	136	100

The study is also attempted to identify the tools used by the academic staff to access information available in the OA resources and it is given in the Table 3. It is found that the majority of the Academic staff were highlighted barriers as "Google search engine" (SD 30.906), occupied first rank, followed by "Email" (SD 28.261) ranked second, "Social Media" (SD 27.253) placed in the third ranked also found in the low level in the overall ranking of the OA resources.

Table 3: Most helpful Sources to know about Open Access Scholarly Publication

Description	Not at all helpful %	Slightly helpful %	Somewhat helpful %	Very helpful %	Extremely helpful %	Mean	Std. Deviation (SD)
Email	_	0.73	16.17	38.97	44.13	27.2	28.261
E-Discussion	-	11.03	27.21	41.18	20.58	27.2	21.3
Library Professional	_	3.67	11.76	40.44	44.13	27.2	27.114
Journals / Resource Websites	_	3.68	27.95	30.12	38.25	27.2	23.21
Conference/Seminar/ Work shop	_	13.24	14.7	46.32	25.74	27.2	23.552
Library Website	_	1.47	19.12	33.08	46.33	27.2	27.251

Colleagues	0.74	3.68	25.74	47.79	22.05	27.2	25.869
Google search engine	_	_	14.7	32.36	52.94	27.2	30.906
Library Staff	_	2.2	19.86	33.08	44.86	27.2	26.386
Posters – printed notices	1.47	8.82	25.73	44.13	19.85	27.2	22.376
Professional forum	3.67	14.7	23.53	27.22	30.88	27.2	14.856
Social Media	_	3.68	16.18	32.35	47.79	27.2	27.253

The Barrier level of OA resources were ascertained among the Academic staff mean value same (27.20) and same is given in Table 4.

Table 4: Barrier level of open access resources

Description	Strongly Disagree %	Disagree %	No Opinion %	Agree %	Strongly agree %	Mean	Std. Deviation
Incomplete or poor abstracting of articles	12.5	27.2	33.08	18.38	8.82	27.2	13.719
Non-availability of full-text articles	5.88	11.02	9.55	40.44	33.08	27.2	21.265
Non-availability of relevant articles	6.61	8.08	20.58	29.41	35.29	27.2	17.254
Not easy to download articles	9.55	16.17	23.52	30.14	20.58	27.2	10.521
Slow internet connection / slow response by the content provider	0	5.88	27.2	32.35	34.55	27.2	21.673
Too many results have shown	6.61	13.23	21.32	27.94	30.88	27.2	13.737
Unfamiliar search options	5.88	15.44	19.85	30.88	27.94	27.2	13.627
Unfamiliar subject terms used in describing the	0	13.97	26.47	28.67	30.88	27.2	17.627
Difficult to locate the URL of the journals/Resources	5.88	10.29	23.52	27.2	33.08	27.2	15.643
The resources are not constantly available at the same URLs address	5.14	11.76	20.58	27.94	34.55	27.2	16.146
The information may not be available later	7.35	13.97	30.14	25	23.52	27.2	12.478

The OA journals are not always authoritative	8.82	12.5	23.52	25	30.14	27.2	12.194
Server down is a major problem in open access Resources	0	7.35	25	32.35	35.29	27.2	21.194
Lack of uniform standard in OA journal publishing industries	2.94	14.7	23.52	27.2	31.61	27.2	15.482
Lack of awareness of OA resources	0	6.61	18.382	33.08	41.91	27.2	23.879

It is found from the Tables 4 that majority of the Academic staff were highlighted barriers as "Lack of awareness of OA resources" (SD 23.879), occupied first rank, followed by "Slow internet connection / slow response by the content provider" (SD 21.673) ranked second, "Non-availability of full-text articles" (SD 21.265) placed in the third ranked also found in the low level in the overall ranking of the OA resources.

#### Conclusion

Research shows that most scholars rely on OA in obtaining the relevant information they need. The output of the research showed that most of the OA resources were used by the male staff as those who follow the master degree. They mainly use the Internet and e-mail for various purposes. Interestingly, though scholars were aware of the availability of OA, many used it as a supplementary way of using information. However, the preference for electronic formats is related to the resource type and time availability of the IT infrastructure. OA electronic journals are very useful for academics. Libraries should identify OA journals and disseminate them among their user groups through different channels, so that users can gain the advantage of academic exchanges. OA is still the subject of a lot of discussion between academician officials and academic publishers. OA is a global effort to provide free online access to scientific and academic research literature.

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## PUBLIC LIBRARY SERVICES IN THE TIME OF PANDEMIC: A SPECIAL REFERENCE TO THE PUBLIC LIBRARIES IN MATARA DISTRICT

#### R. A. P. S. Senevirathna\*

Senior Assistant Librarian, Main Library, University of Ruhuna, Matara, Sri Lanka saku@lib.ruh.ac.lk

#### I. D. K. L. Fernando

Senior Assistant Librarian, Main Library, Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka

kusala@lib.sab.ac.lk

#### Abstract

Information democracy is a major human right issue of a civilized society. Public libraries are one of the main pillars that need to be strengthened by the local authorities to bridge the information gaps within the country. The global pandemic lockdown situation has a challenge to the libraries around the globe by limiting its services and led the libraries to find new dimensions of information dissemination and remote learning. The present study investigates the remote services provided by the public libraries in Matara District before and during the pandemic situation. A survey was conducted to collect data from 38 public libraries. Results revealed that many libraries use free services such as social media, web 2.0 technologies, emails, and phone calls to continue their services to users remotely. Lack of higher authorities' attention, knowledge and technological infrastructure are major limiting factors that the libraries face when providing remote services. More attention towards public libraries needs to be ensured to establish better information democracy and equity among rights to information of the country.

**Keywords:** Public library services, pandemic library management, remote library services, social media services, information democracy

\*Corresponding author Abstract No. ICULA2021 S4

#### Introduction

Right to information is one of the main indicators of democracy in a country that allow all the citizens have equal opportunity and the right to access the information they need (Jayasundara & Bodinayake, 2019). Public libraries serve as a focal point of providing information needs of all levels of the society respecting the social, financial, or any other barriers (Mugwisi et al., 2016). The value of the information services provided by the public library sector is in high contrast in situations like pandemics. This situation limits the access to information of different social layers much further. Thus, the capacity and services of modern public libraries should be transformed to meet the goals of social inclusion (Muddiman et al., 2000). Therefore, the libraries must initiate more innovative alternatives to promote the information democracy of the people (Gunarathna & Alahakoon, 2020). Libraries should be encouraged to provide remote services, especially during the pandemic situation of Covid (Gunarathna & Alahakoon, 2020; Neyra, 2021).

Global lockdowns due to the Covid 19 pandemic have been affecting most of the industries, and the quality of their social lives. Sri Lanka has undergone frequent lockdowns during 2020. Subsequently, library access was limited to prevent the spread of the Covid 19 virus, while patrons were also reluctant to visit public libraries due to personal health and safety. Hence, the public library sector should be updated to par with the prevailing situation of the country and provide the information requirements for its patrons. Public libraries are vital for providing information services to the public. The International Federation of Library Associations and Institutions (IFLA) has provided a comprehensive level guideline for the management of libraries during the pandemic in a global perspective (IFLA, 2020). The American Library Association has drafted a comprehensive guide and best practices and protocols for librarians (ALA, 2020) which provide more insight into library management during the pandemic. The exit strategy from covid-19 for Sri Lankan Libraries published by the National Institute of Library and Information Sciences (NILIS, 2020) provides a national guideline for library operations. All these guidelines will be beneficial for providing better and protective services during the pandemic and similar situations.

The problem leading to conducting the present study is to investigate the modes used by the public libraries in the Matara district to provide in front of the public library users. Pandemic situations trained the public to utilize different remote services to continue the teaching, learning, and information exchange among each other.

#### **Objectives**

The present study aimed to investigate online services provided by the public libraries of Matara district during the Covid lockdown period from 2020-2021.

#### Methodology

Study area - The study area is limited to the randomly selected public libraries in Matara district. Of 41 public libraries ranked by the National Library of Sri Lanka (the revised list, the existing document mentions 38 public libraries), 38 libraries, two in Municipal Councils, two in Urban councils, and thirty-four in Pradeshiya Sabhas were selected. One Grade I, four Grade II, 25 Grade III, and 8 ungraded libraries were among them.

A structured paper and a pencil-based questionnaire were distributed among the public librarian or the person in charge among the 38 public libraries in Matara district. Subsequently, the same questionnaire was distributed as a google form to the same person after being contacted over the phone. Respondents were interviewed over the telephone to verify and investigate the limiting factors towards remote information services. Reminders were sent throughout a month until the number of respondents reached at least 60%. Results were analyzed using SPSS 26 platform. The questionnaire investigated the demographic information related to the librarians and the services they provided before and during the pandemic lockdown.

#### **Results and Discussion**

After a month, there were 23 respondents for the paper and pencil-based or online questionnaire. Of the respondents, 14 were public librarians, and 09 were library assistants. *Among respondent libraries*, 21 were under Pradeshiya sabhas. The rest two were under the urban council and the municipal council. Among Libraries, fourteen libraries *were ranked under grade III*, four were grade II, and one was grade I. Four libraries were not ranked yet. The work experience of the respondents over their designation represents in table 1. Of 23 respondents, 19 respondents had more than six years of working experience and, three had less than five years of service. There was one librarian whose working experience was more than 25.

**Table 1: Work experience of the respondents** 

Designation		- Total					
Designation	<5	6-10	11-15	16-20	21-25	25<	- Total
Librarian	3	0	3	3	4	1	14
Library assistant	0	6	3	0	0	0	9
Total	3	6	6	3	4	1	23

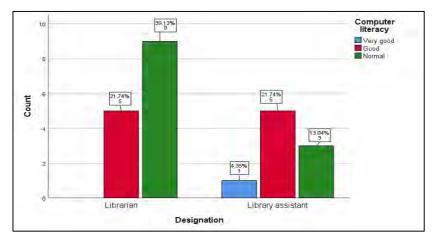
Source: Author complied, 2021

The majority of respondents hold a Diploma or above level of qualifications, while only two respondents had Advanced level as their highest educational qualification (Table 2).

Table 2: Educational qualifications of the respondents

	Education level							
Designation	Postgraduate	Craduata	Dinloma	Cortificato	Advanced	Total		
	Postgraduate	Graduate	Dipiolila	Certificate	level			
Librarian	1	1	11	0	1	14		
Library assistant	0	0	6	2	1	9		
Total	1	1	17	2	2	23		

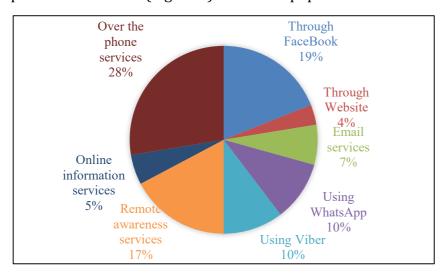
Source: Author complied, 2021



Most of the librarians among the respondents (39.13%) had a basic level of computer literacy, while 21.74% of the librarians having a good level of computer literacy (Figure 1).

Figure 1: Computer literacy of the respondents by the designation (Source: Author compiled, 2021)

As depicted in Figure 1, all the respondents had adequate computer literacy to continue the duties of the library, and 4.35% of the library assistant group had a high level of computer literacy. Eight varieties of service media were used in 23 public libraries before the COVID pandemic situation (Figure 2). The most popular method was the services provided over the



phone. Only 4% of the libraries used to provide their services remotely via websites. Facebook, WhatsApp, and Viber were used predominantly, while 7% of the libraries used emails to provide the required services before the pandemic situation.

Figure 2: Mediums of public library services provided before the pandemic situation (Source: Author compiled, 2021)

Three new services were introduced in several public libraries during the pandemic. Patron inquiry service, information services for school students, and education information service (Figure 3) were newly introduced services. Other services used before the pandemic, mainly email, social media, and remote awareness services (Figure 3), were continued by the libraries with slight improvements.

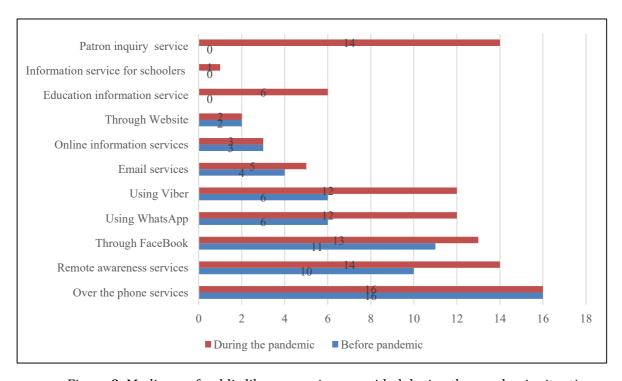
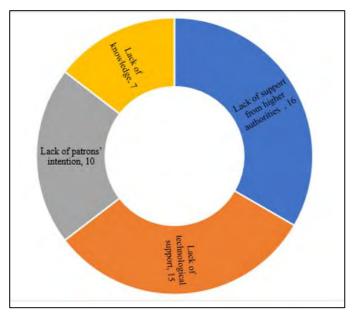


Figure 3: Mediums of public library services provided during the pandemic situation (Source: Author compiled, 2021)



Respondents also highlighted four main **constraints** they met while providing remote services during the pandemic (Figure 4). Lack of support and top management commitment was the most reported limiting factor, while lack of knowledge was reported only by seven public libraries. The intention of patrons to access the library during the pandemic was also identified by ten libraries, as the main factor that not promoted remote services during the pandemic.

Figure 4: Limiting factors to provide public library services during the pandemic (Source: Author compiled, 2021)

### **Discussion and Conclusion**

Libraries have been considering adaptive methods to reach their patrons to continue uninterrupted services during the pandemic by creating new physical, virtual or remote, means of access to information (Neyra, 2021). Some of the libraries have already successfully practiced library collection services (Medawar & Tabet, 2020). As a whole, libraries are adapting to the pandemic through various approaches and continue their services. The public library sector in Sri Lanka is also similar and put immense effort to enhance their services by managing difficulties.

Public libraries of Matara district are supported by educated and experienced staff (Table 1 and 2). These personals have adequate knowledge in technology (Figure 1) to provide library services remotely. They already practiced some of the online library services even before the covid pandemic (Figure 2). Most of the services are provided through free or low-cost mediums, including social media, web 2.0 technologies, and telephones. These services are more cost-effective and easy to reach the patrons. Public librarians from the Matara district use web pages to promote their services (Figure 3). A library website is one of the best mediums that a librarian could disseminate information to a community (Pannananda, 2020). Authorities need to encourage developing web pages, at least district wise to reach public library services to the public.

Same services were continued and enhanced during the pandemic. New services, such as student information services were adopted by some of the public libraries (figure 3). Provide educational information and library needs of learners is a grooving need and challenge for public libraries. Covid pandemic has boosted this need among learners toward e-learning (Perera & Suraweera, 2020). Further, while highlighting the information-seeking behaviors of school children in Jaffna, Jeebakaran and Shanmugadasan (2020) suggested that promoting self-learning among school children, to strengthen the school libraries and teacher librarians. However, school attendance was not took placed regularly in the country since 2019, and students were away from the school librarians and library. Public libraries can fill this gap by providing educational information and specific services for school children as remote services. However, the public libraries in the Matara district have initiated this requirement to some extent (Figure 3). Frequent user surveys need to be conducted by public libraries to investigate the needs of their patrons and act accordingly. These services could also be more improved by referring to the services implemented by academic libraries of the country.

The academic libraries in the country implemented different library services, including OPACs, institutional repositories, online databases with off-campus access together with other conventional online services, article indexes, digital document delivery services, government publications, online/virtual library tours, LMS links, open access books, recommended reading downloads, subject liaison services, voice libraries, laptop lending services, virtual teaching, and plagiarism checking (Fernando & Senevirathna, 2020;

Mashroofa, 2020). All these services may not be easily established in public libraries. However, a nationwide online services platform can be formulated amalgamating the strengths and resources of the National Library, all the public libraries, school libraries, and university libraries.

Public libraries in the country manage with several difficulties and limitations. The Covid pandemic situation is an unexpected barrier encountered, and it is a more challenging task for the public librarians to maintain their services. Public libraries in the Matara district also faced similar situations that avoid reaching the wider user community online. Lack of support from higher authorities, poor technological infrastructure, Lack of patron's intention, and Lack of knowledge were some of the limitations identified in this study (Figure 4). A similar situation has also been reported in other public libraries in the country (Dharmathilaka, 2020). This situation becomes crucial when public libraries require to deliver services for special groups in society, especially the visually impaired patrons (Kumar & Premadasa, 2020). The present study provides evidence for the lack of technical background to provide user needs accordingly. Patrons, at the same time, experienced bottlenecks to reach their libraries. A recent study done by Piyumali and Wijithadewa (2020) highlighted that 72.6% of undergraduates in Kelaniya university lacked suitable technological devices to access the library services, and 83.7% faced difficulties to reach eNenasala or a paid computer facility nearby. Pannananda (2020) highlighted the problems facing when providing information services through library websites. Librarians can lesson learn these points while providing service via websites. The best practice that could suggest is to formulate district-wide web pages for public libraries. Deka (2020), adding similar and more challenges from the Indian perspective towards remote information dissemination, including the psychological drawbacks of electronic teaching and learning. Atikuzzaman (2020) has reported that a negative impression of online teaching and learning in Bangladesh. Thus, public libraries need to understand the situation of the public and arrange remote services that involve a technological bridge to reach their remote users. Social media platforms, such as Facebook, WhatsApp, Viber, YouTube, web 2.0 solutions, and other platforms such as Wikipedia pages, Google blogs, WordPress can also be used for free of charge. General users can easily access these services through a smartphone and meet their information requirements. At the same time, these services should design to reduce the psychological stress caused by online information services.

Public libraries in Matara district have taken initiative measures to reach their patrons remotely and provide continuous service during the pandemic situation. However, these services can be further developed and monitor to meets the patron's needs more effectively.

### Recommendations

It is high time to performing necessary actions to mitigate the urgent needs and form required policies to prevent long-time issues. Higher authorities should pay more attention to public libraries in the country, and provide adequate infrastructure and technical knowledge. Public libraries can

either mimic the measures taken by the national library or the academic libraries in the country or associate their patrons with these national-level remote services. Policymakers and planners should take the necessary steps to create a nationwide library network that shares the country's resources, provide a common platform, and form a national technological team to assist public libraries. It will ensure the information democracy of the country, by bridging the information gap irrespective of the social and economic boundaries

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# DEVELOPMENT AND VALIDATION OF A TOOL TO PREDICT INFORMATION SEEKING BEHAVIOUR OF MEDICAL UNDERGRADUATES, SRI LANKA

# M. P. L. R. Marasinghe\*

Senior Assistant Librarian, Faculty of Medicine, University of Kelaniya, Sri Lanka lakmini@kln.ac.lk

#### K. T. A. A. Kasturiratne

Professor, Department of Public Health, Faculty of Medicine, University of Kelaniya, Sri Lanka

anuradhani@kln.ac.lk

# M. N. Chandratilake

Cadre Chair, Professor and Head of the Department, Department of Medical Education,
Faculty of Medicine, University of Kelaniya, Sri Lanka
mnchandratilake@kln.ac.lk

#### **Abstract**

Information seeking behaviour is a set of actions expressing information needs, searching, evaluating, selecting, and utilization of information. The study aimed to develop and validate a tool to measure the information seeking behaviour of medical undergraduates in Sri Lanka. Final and penultimate year students in medical faculties in universities of Kelaniya, Peradeniya and Colombo, and Eastern University in Sri Lanka were invited for the study. The elements of information seeking behaviour were defined by thematically analyzing the content of focus group nine discussions with medical undergraduates. The scale was developed based on the Integrated Behavioural Model. The preliminary scale with 60 items was developed and pretested. The responses of a field test with the participation of 436 medical undergraduates were subjected to confirmatory factor analysis (CFA) and psychometric analysis. The tool was refined to include 40 items and the revised version was administered to 645 of medical undergraduates. The sub-components of the 40-item tool partially matched with the theoretical framework and the reliabilities of overall and sub-components demonstrated high to moderate reliabilities. The tool can be used to evaluate the information seeking behaviour of medical undergraduates effectively.

**Keywords:** Information seeking behaviour, Integrated behavioural model, Medical undergraduates

\*Corresponding author
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### Introduction

Higher education is knowledge-driven and dependent on information. The information seeking behaviour (ISB) of undergraduates is a purposeful process of searching and utilizing information for information needs and/or interests (Pwadura et al., 2018). It is important in planning, decision making, and reduction of uncertainty (Oluwaseye et al., 2017).

The ISB has become an essential attribute for academic success in the new paradigm of medical education (Ajiboye & Tella, 2007). The rapid proliferation of information is highly evident, especially in the field of medicine (Ajayi, 2004), and keeping up-to-date needs an effective and efficient approach to ISB. The ISB is an integral part of the learning process for the academic success of medical undergraduates.

The ISB of medical undergraduates cannot be accurately measured or predicted without developing a validated tool. The current study aims at developing a valid and reliable tool to measure and predict the ISB of medical undergraduates based on a suitable theoretical model of ISB in the Sri Lankan context. It facilitates identifying best practices and inform information system design for academic success.

# **Objectives**

The general objective of the study was to develop and validate a tool to measure the information seeking behaviour of medical undergraduates in Sri Lanka. The specific objectives were to define the elements of ISB, to determine a suitable theoretical model to predict ISB, to develop a tool, and to establish its reliability and validity for measuring the ISB of medical undergraduates.

# Methodology

The study was conducted in four medical faculties in Sri Lanka; University of Colombo, Eastern University, University of Kelaniya, and University of Peradeniya. Conventionally, the University of Colombo and Peradeniya have a greater proportion of students entering based on merit while the other two Universities have a greater proportion of students entering on the district basis (de Silva et al., 2006). This provides a study population comprising students representing different social, educational, and cultural backgrounds from many districts of Sri Lanka. This will increase the generalizability of the findings of this study. Students in the final and penultimate years in four medical faculties were considered as the study population as they have explored and experienced information more than students in earlier years. They were in a better position to reflect on their information seeking behavior critically.

Fishbein's Integrated Behavioural Model was selected as the theoretical model from a literature review. The development and the validation of a questionnaire based on this theory were carried out in three phases. In phase I, to identify the items related to each aspect of the

theory, nine focus group discussions (FGDs) were conducted with 85 final year medical undergraduates in four universities. The FGDs provide a greater emphasis on the points of view from different participants than doing individual interviews (Thomas et al., 1995). All focus group discussions were audio-recorded and the records were transcribed verbatim. Thematic analysis of content was carried out using Richie and Spencer framework as the basis (Richie & Spencer, 1994).

In phase II, a draft of the preliminary questionnaire was pre-tested for language clarity, ambiguity, and relevance with the participation of the undergraduates (30) in six academic years and 15 academic staff members in the Faculty of Medicine, University of Kelaniya. The relevance of each item was reviewed by experts. Improvements were made based on the feedback. The preliminary 60 items with 5 point-Likert scale were administered among 653 fourth-year medical undergraduates in four universities. The responses were subjected to confirmatory factor analysis (CFA) and the calculation of internal consistency. The CFA confirmed some of the key domains in the theoretical model and, 40 items were representative of these domains.

In phase III, the final 40-items with 5 point-Likert scale was administered among 645 medical undergraduates (a different cohort from the one who responded to the 60-item scale) in the same four medical faculties. The internal consistency and the CFA were computed to reexamine the domains.

Ethical clearance for the study was obtained from the Ethical Review Committee (ERC) of the Faculty of Medicine, University of Colombo, Eastern University, University of Kelaniya, and University of Peradeniya.

### **Results and Discussion**

In phase I, the male to female ratio was 47:38 and the average age of participants was 26.1(range: 24 to 29). The themes identified varied from conceptualization of ISB to needs, facilitators, strategies, comparison of ISB with the academic year, time & place, barriers, dilemmas, devices used, mode of finding information, and suggestions to improve the ISB of medical undergraduates.

The response rates of Phase II and III were 66.76% (436/653×100) and 70.08% (452/645×100). The sample size is good enough for the analysis because the rule of thumb considered by most of the researchers is the ratio of a sample size to the number of free parameters or items: 5 to 1 (Bentler & Chou, 1987).

In phase II, the face validity and the content validity was ensured by selecting the items by analyzing focus group discussions, pre-testing the scale and reviewing the preliminary scale by subject experts. The reliability of the scale was measured by internal consistency using Cronbach's alpha and the CFA was used for the construct validity of the scale. Twenty items

were removed from the original questionnaire based on the ambiguity, CFA and internal consistency, and the 40-item scale was developed. The model fit of the 40-item tool was acceptable based on RMSEA, but the value of SRMR, CFI, TLI do not support the model fit well (RMSEA= 0.073, SRMR=0.091, CFI= 0.675, TLI= 0.652). The minimum standard values of these fit indices for the good fit are RMSEA  $\leq$  .08, SRMR  $\leq$  .08, CFI  $\geq$  .90, TLI  $\geq$  .90 (Tay & Jebb, 2017). The domains identified were: intention, knowledge and skills, salience, environmental constraints, and habit. The Cronbach's alpha values for the internal consistency were measured for each domain of the 40-item scale. The Cronbach's alpha values interpreted by Ekolu & Quainoo (2019) were  $\alpha < 0.5$ : low reliability, 0.5  $< \alpha < 0.8$ : moderate (acceptable) reliability,  $\alpha > 0.8$ : high (good) reliability. The reliability of intention ( $\alpha = 0.726$ ), knowledge & skills ( $\alpha = 0.712$ ), environmental constraints ( $\alpha = 0.659$ ) and habit ( $\alpha = 0.659$ ) were acceptable. The reliability of salience ( $\alpha = 0.869$ ) was good.

The scale was further validated in phase III. The final 40-item measurement was a good fit model from CFA (RMSEA = 0.053, SRMR= 0.066) to assess and predict the ISB of medical undergraduates. The values of CFI and TLI were 0.675 and 0.653 respectively. The domain-level reliabilities were moderate in: intention ( $\alpha$  = 0.634), knowledge and skills ( $\alpha$  = 0.540), habit ( $\alpha$  = 0.561) and low in: salience ( $\alpha$  = 0.438), environmental constraints ( $\alpha$  = 0.470). However, the reliability of the overall measurement was acceptable ( $\alpha$  = 0.744).

# Conclusion

The tool which has been developed to assess the ISB of medical undergraduates was with acceptable validity and reliability. All the items of the scale were based on the integrated behavioural model and the assessment and predictions would be more credible.

### Recommendations

The reliable and validated tool developed based on the integrated behavioural model can be used to evaluate and predict the ISB of medical undergraduates successfully. It will help immensely to academia to promote information seeking among undergraduates, and the libraries can make decisions on allocating resources based on the findings. Although the number of respondents was adequate for a meaningful statistical analysis, the study was entirely conducted in Sri Lanka and the tool should be tested in many more countries to determine its global applicability. Some of the domain reliabilities could have been better.

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# USER SURVEY ON ONLINE LIBRARY RESOURCES AND SERVICES DURING THE COVID-19 PANDEMIC: A CASE OF UNIVERSITY OF KELANIYA

#### R. A. A. S. Ranaweera\*

Senior Assistant Librarian, Library, University of Kelaniya, Sri Lanka achala@kln.ac.lk

### A. P. U. De Silva

Senior Assistant Librarian, Library, University of Kelaniya, Sri Lanka udayangani@kln.ac.lk

# A. S. Rubasinghe

Senior Assistant Librarian, Library, University of Kelaniya, Sri Lanka sajeewanie@kln.ac.lk

### **Abstract**

Covid-19 is one of the tragic outbreaks of the world. Emergence of Covid-19 has become a global crisis and has created a massive impact on the day today lives of people including business, education, health, transportation and careers. Temporary closures and social distancing were introduced to limit the spread of the virus in the society. Education was drastically affected by these restrictions and preventive measures. Universities were physically closed but methods were devised to continue their educational process. Online teaching and e-learning technologies were applied in university education. Along with that, university libraries round the globe also shifted their services more towards to digital and virtual environments. In Sri Lanka too, university libraries also shifted their formal services to digital platforms as much as possible to cater to the academic community who study and work from home. This study reflects on the user's opinion on the library resources and services rendered to them by the library, university of Kelaniya during the outbreak of Covid-19. It also investigated the challenges and barriers faced by the users using library facilities in this period. There were 264 undergraduates from the faculties of Commerce and Management Studies, Computing and Technology and Humanities participated in this survey. Adhering to the health guidelines, an online questionnaire was distributed among the study sample using the Google online form to collect data for this study. Study findings confirm that the 59% of the users were satisfied with the online library services and facilities offered by the library. Past papers repository (74.6%) was the most frequently used online library resource Technical issues and lack of awareness prevented the undergraduates from fully utilizing the online resources and services offered by the library during the pandemic.

**Keyword:** Online library services, Online library resources, User satisfaction, Covid 19 pandemic, University library

\*Corresponding author Abstract No. ICULA2021 R1

### Introduction

The global pandemic "Corona virus" or the "Covid-19", was first reported in Wuhan, P. R. of China on the 31<sup>st</sup> of December 2019. It has rapidly spread to all continents, damaging all aspects of people's lives, causing high rates of hospitalizations and deaths. Lockdowns, restrictions on day to day activities were imposed in most countries across the globe to control mass scale spreading of the Corona virus. The Covid-19 and its associated restrictions have severely affected the economy, health and specially, the education sector both locally and globally.

Government of Sri Lanka imposed an island wide curfew for the first time on 20th March 2020 as a preventive measure to stop the spreading of the Covid-19 across the country (NILIS, 2020). This emerging situation entirely changed the day to day lives of the citizens of the country affecting all aspects including economic, social, education and health. Temporary closures and lockdown situations had been occurring from time to time within the country. Education sector of the country was critically interrupted due to the prevalent situation and schools and universities were closed for months in the process. However, despite the outbreak of Covid-19, the education process was supposed to continue though the schools and universities were to remain physically closed. Many nations successfully used online modes for teaching and learning, as recommended and introduced by UNESCO (Mbambo-Thata, 2020). Along with the other countries, Sri Lanka also shifted its traditional way of learning and teaching in primary and higher education to an E-Learning platform. University libraries were no exception and as an information provider to the academic community, library had to continue its services to users though the libraries were physically closed. Hence, to collaborate with the parent institute, the university libraries also shifted to this newly introduced online environment by transferring the library services more towards digital and online modes. Staff of the library also adjusted to this new environment as it was the best way of supporting the teaching and learning ventures in their respective universities during the pandemic.

In Sri Lanka, university libraries offer online library resources and services to users while the doors of libraries remain closed for the users. Services such as OPAC, digitalization of the collection, electronic databases with remote access, past papers repositories and institutional repositories were offered to users. In addition to these services, the subject liaison service, document supply services and user assistance services via chat, email and telephone assisted the undergraduate when they immediately needed any information assistance from the library. Library of the University of Kelaniya is always connected with the users through these online resources and services and the library has managed to continue its services to users while the library was physically closed.

Covid-19 pandemic situation widened the research horizons in university libraries in both the international and national research arena. Though this is a novel research area, few research have been conducted on Covid-19 and its impact on university libraries in Sri Lanka, exploring the topics of shifting the traditional role to digitized libraries, library usage during the pandemic, changing role of the librarians, etc. (Fernando and Senevirathna, 2020; Mashroofa, 2021; Ruwanpathirana and Pathirana, 2021). However, the present study was the first attempt of addressing the topic of library online resources and services offered by the University of Kelaniya during the Covid-19 pandemic.

# **Objectives**

This study mainly focuses on the library services offered by the University of Kelaniya during the Covid 19 pandemic. The principal objective of this study was to explore the user satisfaction on online library resources and library services offered by the University of Kelaniya during the Covid-19 pandemic. It also aimed to identify the frequently used online library resources and services during the contagion of Covid-19. Finally, to find out the challenges and barriers which users encountered while using the library resources and services during the pandemic.

# Methodology

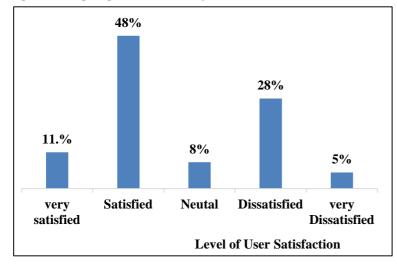
Descriptive research approach was utilized for this study. University of Kelaniya has six Faculties, i.e., Social Sciences, Humanities, Science, Commerce and Management Studies, Medicine and Computing and Technology. This study was limited to the three faculties located in Dalugama and Paliyagoda premises. The total population of this study was 5460 undergraduates and based on the Krejcie and Morgan (1970) sample size determination table, 357 undergraduates were selected as the study sample from the faculties of Commerce and Management Studies, Computing and Technology and Humanities. Convenience sampling method was used for this study. Primary data for this study was collected through a structured questionnaire. This questionnaire was developed to get information on usage of library services and resources by the undergraduates, overall user satisfaction of services and resources, challenges and barriers they encountered and demographic information of the respondents. An online questionnaire was distributed among the study sample via Google form to collect data for the study. Primary data was descriptively analyzed and presented according to the research objectives of the study.

#### **Results and Discussion**

According to the survey results, out of 357 online questionnaires 264 were received with a return response rate of 74%. Gender distribution of the sample size consisted of 32.2% (85 undergraduates) males and 67.8% (179 undergraduates) of female. Majority of the sample represented the Faculty of Commerce and Management studies (72.7% - 192 undergraduates). 15.2% of the sample attached to the faculty of Humanities and sample

representation of faculty of Computing and Technology was 12.1%. Considering the year wise distribution of the sample, 37.1%, 34.8%, 14.4% and 13.6% represented the first year, second year, third year and final year undergraduates respectively.

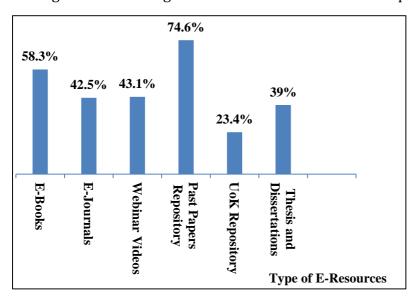
The first objective of this study was to explore the overall user satisfaction on the online library resources and services given by the library to the users on their learning activities. Figure 1 highlights the survey results on the level of user satisfaction. 11% of the users were



very satisfied and 48% of the patrons were satisfied with the online resources and services provided by the library during the outbreak of Covid-19. However, altogether 33% of the users were not satisfied with the library services granted for the users when the libraries were physically closed for them.

Figure 1. User satisfaction on online library resources and library services

Figure 2 showcase the survey results of frequently used online library resources by the undergraduates during the outbreak of Covid-19. Past papers repository was the highest



used online resource, which marked 74.6% of the respondents and followed by ebooks (58.3%) and webinar videos (43.1%). The least used online resources offered by the library was the repository of the university (23.4%)which contains the articles of university conferences. symposiums, publications of academic staff etc.

Figure 2. Usage of Online library resources

The final research objective was to seek the challenges and barriers which users have been facing during the pandemic when they used library resources and services for their learning

engagements. Survey findings show that 48.3% of the users say that the access difficulty in terms of technology is the main barrier for using the library resources. At the same time, unavailability of the necessary textbooks and past papers (10%), lack of awareness of the library services and resources (7%), and lack of user guides (2%) to the e-resources are some barriers to access of the online library services smoothly. Also, 3% of the users denoted that staff assistance is not sufficient when attending to user queries during the pandemic time.

### Conclusion

Based on the survey findings, the study concluded that the library, university of Kelaniya has played a significant role in providing information and disseminating knowledge for the undergraduates of the university during the pandemic. Survey results confirm the success of the initiatives taken by the library to offer a better library service which complied with the elearning activities of the university of Kelaniya during the pandemic situation. Considering above findings, the study recommended the following suggestions to be followed to improve the quality of the online library services, university of Kelaniya. Library must conduct more user awareness programmes and training sessions in making aware of the users on the library online resources and services. Also frequently collecting user feedbacks regarding services and resources is much important to improve the quality of services and resources of the library. Finally, providing adequate technical support, if possible would be beneficial to users to enhance the usability of online library resources and services offered by the library, university of Kelaniya during the pandemic.

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# INFORMATION SEEKING BEHAVIOR OF UNDERGRADUATES AND THE USAGE OF E-RESOURCES: A CASE STUDY OF SOUTH EASTERN UNIVERSITY OF SRI LANKA

### **U. Mohamed Fowsh\***

Library Information Assistant, South Eastern University of Sri Lanka, Oluvil, Sri Lanka fowsh7585@gmail.com

# A. H. K. Balasooriya

Acting Librarian, The Open University of Sri Lanka, Nawala, Sri Lanka hbala@ou.ac.lk

#### **Abstract**

Electronic resources (e-Resources) can be defined as a kind of information sources that could be stored electronically and made accessible through a physical or cloud-based electronic system(s) or a computer network(s). It also provides access to current information as those are updated frequently. This study aims to evaluate the factors influencing the usage of e-resources and the challenges faced in accessing electronic resources in the library. The survey was conducted among the final year undergraduate students of the Management faculty using a closed-ended questionnaire with multiplechoice questions. The questionnaire was distributed among 50 final year Management undergraduate students. Thirty-five students (70%) out of fifty responded to this survey. Findings showed that 80% of users were satisfied with the activities of the library staff, searching facilities, and a quiet environment. Of which 50 respondents, 60% were happy with searching electronic resources, IT facilities and computer networks, Wi-Fi connection, and the availability of subscribed materials. This study identified challenges faced by the students with the inadequate number of computers (only 20 in number), internet connectivity, information overload, and malfunction of the internet. The competency level of the students, library facilities, and user education programs were the main factors that influenced the e-resources usage. This study has identified some suggestions for improving electronic resource facilities and services in the university library and approaches to solve problems. Further, this has given some recommendations to improve the electronic resources collection, accessibility, and customer care to fulfill the objectives of the university library.

**Keywords:** e-Resources, Information Seeking Behavior, Search patterns of undergraduates

<sup>\*</sup>Corresponding author Abstract No. ICULA2021 F1

### Introduction

Electronic resources are in which information sources that are stored electronically and made accessible through electronic systems and computer networks. It also provides access to current information as these are updated frequently (Kenchakkanavar, 2014). Through their various search techniques, electronic resources provide extensive links to explore additional resources or related content. According to Mashroofa, Jusoh, and Chinna (2019), e-resources are valuable resources for teaching, research, and learning. Thus, many libraries, including universities in the present day, provide electronic resources for higher education and research. These resources include OPAC, CD-ROMs, Online-Databases, E-journals, E-books, open educational resources, Internet resources, etc. Electronic resources provide access to information that might be restricted to the users because of licensing mode or finances. Geographical location will not affect access to e-resources unless there is a digital divide.

According to Bryant (2021), electronic resources (or e-resources) are materials in digital format accessible electronically in varied digital formats such as Adobe Acrobat documents (pdf) and webpages (HTML). E-resources also include newspaper articles, encyclopedia articles, dictionaries, images, and many other items.

The South Eastern University of Sri Lanka (SEUSL) libraries gives a conducive learning environment, excellent facilities, and effective and efficient services to the clients. Library provides various facilities and services such as borrowing, online renewal and reservation, document delivery, online information searches, WebOPAC, photocopying, and a range of e-resources.

Mashroofa (2012) stated, "Information commons are now widely accepted for designing physical spaces. Information commons consist of places for individual study, group work, multimedia production area, computer labs, and classrooms with reference services librarians. Usually, it is a collaborative effort of library and IT staff." Therefore, university libraries should redesign the usual study space into information common.

# **Statement of Problem**

Identifying the factors influencing e-information seeking behavior of students will be helpful to the Library of the South Eastern University of Sri Lanka and the CONSAL administrators to decide the new subscription or renewing current subscription to e-resources. Additionally, it is also helpful to understand the challenges or barriers of using e-resources to propose some new strategies to overcome these barriers.

Reviewed literature shows that less research has been conducted in this area in Sri Lanka for undergraduate students. Also, no previous studies have been done at the SEUSL on undergraduates of the Faculty of Management and Commerce. The following research questions were formulated, based on this problem.

# **Research questions**

- 1. What are the factors influencing the electronic information-seeking behavior of the students?
- 2. What are the challenges and barriers faced in accessing electronic resources by the students?

# **Objectives**

The main objective of this survey was to examine the factors influencing the information-seeking behavior and challenges faced in using electronic information resources by the final year undergraduate management students of the Faculty of Management and Commerce of the SEUSL. Identifying the satisfactory level of students towards the library e-resources, level of user competency related to searching skills, Internet usability and self-efficacy, and exploring the library facilities and infrastructure to support the students were the specific objectives of this study.

# Methodology

A survey questionnaire was used as the research instrument, and the collected data were analyzed using descriptive statistics. According to Sekeran and Bougie (2016), the questionnaires are proven to be the best research instrument in the world in survey researches, specifically in evaluating services of libraries. The survey questionnaire used in this study to collect data mainly consisted of closed-ended questions. The population frame was taken from the Assistant Registrar, Faculty of Commerce & Management, and questionnaires were distributed among the sample of students.

The questionnaire had questions to explore the purposes of the students' visits to the main library, the e-resources utilized, the e-information collection, the students' awareness level regarding e-resources, challenges/barriers they encountered, and the factors influencing e-information seeking behavior. The competency level of the students, library facilities, infrastructure, and user education program were the main factors considered.

**Population - The population included males and females of** final year undergraduate students (50) of the Faculty of Commerce & Management of the SEUSL. According to Krejcie and Morgan (1970) table in Sekaran and Bougie (2011), if the population is 50, the sample size should be 44. We expected 44 responses (100%) from the survey participants but, usually researchers rarely receive 100% response rate. We also received 35 (70%) response rates to the survey.

Variables - This study analyzed the usage of e-resources. Final-year undergraduate students were selected as participants for the study. Electronic information-seeking behavior was the dependent variable of this study and, there were some independent variables and sub-variables (Figure 1).

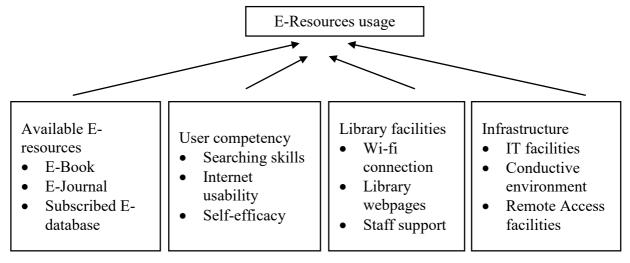


Figure 1 Identify independent (IV) and Dependent variables (DV)

### **Results and Discussion**

The total population of this study consists of final year management students of the South Eastern University of Sri Lanka. Only 35(70%) participants out of 50 responded to the survey questionnaire. Of the 35 respondents, twenty-one (60%) were female students, and fourteen (40%) were male students.

Many factors influence the attitudes on e-resources utilization. Computer Literacy and lack of retrieval skills limit student's ability to access electronic resources effectively. Also, issues such as difficulties faced in finding relevant information and limited facilities such as printing documents were taken into consideration.

# Available electronic resources and usage

The use of electronic resources is one of the main factors considered in this study. Eresources usage and having access to essential e-resources websites determine the quality of an organization. Out of all respondents, 37% prefer to use e-journals, while 28% of participants prefer to use e-databases. Among the rest, 25% prefer to use e-books and the remaining 10% use e-thesis (Figure 2).

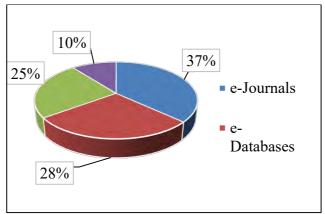


Figure 2 Using e-Resources

# **User competency**

The searching skills of the students are shown in *Table 1*. Twenty-six participants (74%) indicated that they have either very good or excellent searching skills, while 20% (7) of students having sufficient skills. The remaining six percent answered that their skills were insufficient. However, some students need awareness on searching databases.

Table 1 Searching, Internet facilities and Corporation of the library staff

Variables	Excellent	Very good	Sufficient	Insufficient	No Response	Total
Searching skills	5	21	7	1	1	35
Internet facilities	3	21	7	3	1	35
Corporation of the library staff	10	18	4	3	0	35

# Library facilities

Of participants, 24 (63%) rated that the library provides excellent and very good internet/Wi-fi facilities. Among the rest, 20% of students responded that the facilities are sufficient, while the others answered insufficiently. Students face difficulties when accessing the relevant e-resources. Of respondents, 28 students (80%) mentioned that they were well satisfied with the support given by the library staff for finding information. Only a few students (3) answered that their support was insufficient.

#### Infrastructure

The library has to provide adequate facilities and remote access for the benefit of students who seek e-information. According to this study, it was observed that the library has adequate IT facilities for those who use e-resources. More than 74% of the students were satisfied with the IT facilities and e-resources available in the library.

#### Conclusion

The majority of the users in their comments indicated that they were satisfied with the cleaning, opening, and closing time of the e-resources section. Creating a peaceful environment in which students can learn is one of the most important factors to be considered, and more than half of the students responded satisfactorily. Considering the comments based on satisfaction in printing, half of the students expressed that they were satisfied while others expressed less satisfaction. Furthermore, students were happy with the facilities available for copying, replicating downloadable research papers and articles. The majority of the students were satisfied with the facilities available in the e-resources section, such as internet connection, printing, and staff support. A few of them indicated that they had faced difficulties in searching and downloading research articles. They also mentioned that lacking IT knowledge, training for accessing e-resources, and language barrier were the challenges they faced when accessing e-resources. Many students indicated that they had visited the library Website.

### Recommendations

Issues such as slow internet connectivity and problems associated with downloading documents, authentication/login problems, and difficulties occur in finding relevant information, should be corrected.

Administrative decisions should take for proper maintenance of IT facilities, upgrading software, and improving speedy internet connections.

It is necessary to upgrade the infrastructure facilities for accessing computer networks, eresources covering all subject contents and, furniture.

The conducive learning environment for the e-resources section is crucial for the student's learning.

University should increase the budget for subscribing more electronic resources covering all subject content. The library should take feedback about e-resources at regular intervals. The library should take user feedback on e-resources collection at regular intervals. Also, the library should receive suggestions and recommendations from the faculty members and the students. It will help to strengthen the e-resources collection, update the web page, and enhance the user services.

Facilities should provide for students to have unrestricted access to print retrieved and download documents.

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# SCIENTOMETRIC STUDY ON FOSSIL FUEL SCHOLARLY PUBLICATIONS: A GLOBAL PERSPECTIVE

### M. Indrani\*

Assistant Professor of Chemistry, Sri G.V.G Visalakshi College for Women, (Autonomous)

Udumalpet, Tamil Nadu, India

m.indrani76.jit@gmail.com

# Dr. C. Murugan

Professor and Head,
Department of Library and Information Science, Periyar University,
Salem - 636 011, Tamilnadu, India

#### Abstract

This study has been carried out to evaluate the research performance of scholarly publications in the field of fossil fuels at the global level applying scientometric analysis. The required data was collected through the Web of Science database from Clarivate Analytics. This study focuses on a variety of parameters on Fossil fuels literature comprising of articles, reviews, proceeding papers, editorial materials, meeting abstracts, news items, book chapters, letters, book reviews, notes, corrections, data papers, retracted publications, reprints, discussion and bibliography. This paper measured the literature output of fossil fuels including year wise growth rate of articles, document wise distribution, top ten subjects, top ten leading authors of publications, top most countries, and ranking of top ten journals etc. As far as this study is concerned, researchers have identified that this is the first scientometric study which is done in the field of fossil fuels research output worldwide for the period 1989-2016.

**Keywords:** Fossil Fuels, Scientometrics, Bibliometrics, Web of Science, Scholarly Publications

\*Corresponding author Abstract No. ICULA2021 I1

### Introduction

Fossil Fuels which includes Petroleum oil, coal and other sources like natural gas, are nonrenewable resources that were created when primitive organisms expired and were slowly buried under the earth. For the past thousands of years, diverse forms of fossil fuels were formed based on what type of organic content was present in them, for how much time it was under the earth and what temperature and pressure conditions existed over the years. Currently, fossil fuel industries excavate for these energy sources, burn them to produce power, or process them for use as fuel for vehicles and other temperature raising purposes. Over the few decades, most of the emissions due to human activity came from the burning of fossil fuels. The Government allotted divisions for energy production retains sufficient petroleum reserves, tries to produce accountable growth and expansion of oil and gas resources and implements rigid liabilities over them. Also, researchers around the globe who are involved in fossil fuel exploration are developing technologies to decrease carbon emissions and attempts to see that fossil fuel energy sources play a significant role in global clean energy future. Fossil fuels occupy an important part of current life and trade and will continue to be so for at least next 10 to 20 years. A shift to cleaner, safer energy source is required to bring down global warming. Presently, Renewable energy is growing fast, but still it is at a distant place to substitute fossil fuel energy sources. Even if oil production declines soon, fossil fuels will govern the world's energy source for some more years. In the near future, minimising the use of oil, natural gas and coal for human needs will be highly needed for reducing pollution. Oil will remain the world's top energy source even for the next decade, and the reduction in the quantity of production if any could increase the cost continuously.

# **Focus Of The Study**

Currently fossil fuels are the major sources for meeting our energy demands. Having realized the importance of fossil fuels in our daily life, the author has chosen this topic for the study to know the finer details of research carried out all over the world on this field. In the present study, we tried to assess the research contributions of fossil fuels from 1989 to 2016, in order to analyze the document wise publications, year wise contribution, relative growth rate of fossil fuels, ranking of top ten institutions, authors, research areas and core journals, top funding agencies etc.

#### **Review Of Literature**

According to Tague-Sutclifee (1992) Scientometrics is defined as "the study of the quantitative aspects of science as a discipline or economic activity. It is part of the sociology of science and has application to science policy-making. It involves quantitative studies of scientific activities, including, among others, publications, and so overlaps bibliometrics to some extent". Van Raan (1997) defined that "scientometric research is devoted to quantitative studies of science and technology. It aims at the advancement of knowledge and the development of science and technology; it is also in relation to social and political

question". Fossil Fuels are energy-rich substances that have formed from long-buried plants and microorganisms. For example, the gasoline that fuels our cars, the coal that powers electrical plants, and the natural gas that heats our homes are all fossil fuels. There are three major group of primary energy such as Nonrenewable energy, Renewable energy and waste (Demirel, 2012).

Ho (2012) investigated the characteristics of top-cited articles published in the Web of Science on Chemical Engineering discipline during 1899-2011. The findings of the results revealed that 3828 articles were produced from 1931to 2010 and 54% of the articles were published before 1991, and 49% top-cited articles originated from USA. The top eight productive institutions are all located in USA. Velmurugan and Radhakrishnan (2017) have analysed the observations of research publications on Phytochemistry in India as seen from the Web of Science (WoS) database during 1994-2014. The highest number of research articles (11.6%) were published in 2014 throughout the world and the majority of Indian literature (23.1%) was published in 2011. Most of the documents are research articles (50.4%) and placed in the first rank. Huang and Ho (2011) examined the research on corporate governance research publications in journals collected from SSCI, during 1992-2008. It found the most frequently used author keywords 'Ownership structure' and followed by 'board of directors'. Velmurugan and Radhakrishnan (2016) have examined the publication research productivity in Malaysian Journal of Library and Information Science (MILIS) for the period between 1996 and 2014 covering a total of 315 research publications. The results showed that 8.89% was the maximum research output in 2011 and a minimum of 4.13% was in 1998. Murugan and Balasubramani (2012) carried out a scientometric analysis based on Remote Sensing research output at international level during 1975 – 2010 with a total number of 1188 research articles published and the cited references were 30654. It was found that the average number of publications published per year was 38.07. The highest number of paper (119) was published in 2009. The USA topped the list (39.8%) of publications, followed by UK (10.8%) publications, and India (7.8%) publications respectively.

# **Objectives**

The objectives of the study are:

- To find out the renowned institutions doing research on fossil fuels
- To highlight the significance of fossil fuels
- To show how dependent are we to fossil fuels
- To make people realize that burning of fossil fuels is one of the main cause for air pollution and climate change
- To make people understand that it is high time we should shift to alternate energy sources

# Methodology

The Web of Science core collection (WOSCC) database was chosen to collect data. The search string "Fossil fuels" was given in the topic tag globally which were indexed by SCI-EXPANDED, SSCI, A & HCI during 1989-2016. A total of 18,131 literature outputs were identified. To evaluate the research publications of Fossil fuels, parameters like relative growth rate (RGR) and Doubling Time (DT), trend line analysis such as Exponential Growth Model and R- squared value (R<sup>2</sup>) in statistical tools were used.

## **Results**

The findings of the study indicates that the maximum number of (84.05%) research articles were journal articles and ranked first. The majority of 66 (0.364%) research papers were published by 'Masjuki HH' and he was ranked first. Out of 10,416 Funding Agencies, the maximum number of 483 (2.664%) research articles was published by National Natural Science Foundation from China and a minimum number of 69 (0.381%) publications on fossil fuels was funded by European Union during the period of study. The most productive source title was 'Renewable Sustainable Energy Reviews' with 829 (4.572%) publications out of 18,131 articles and has occupied first rank. The most productive country was United States with 4,841 (26.7%) research articles and got first rank and India has ranked fifth position with 943 (5.201%) research papers among the top ten countries. Energy Fuels has received 6838 papers (37.714%) and got first rank and last rank was obtained by Chemistry Physical category with a small number of papers of about 923 (5.091%). As far as this study is concerned, researchers have identified that this is the first scientometric study which is done in the field of fossil fuels research output worldwide for the period 1989-2016.

## **Recommendations**

Researchers working on fossil fuels should focus on other alternate energy resources. More funding has to be contributed by every nation for doing research on alternate energy sources. There is more to be explored on the emerging areas of biofuels. Countries should collaborate among themselves in capitalizing the alternate energy resources.

# **Conclusion**

The sources that supply fossil fuels are limited and hence would become exhausted after sometime. The cost of fossil fuels are shooting up continuously, which pose a severe financial burden on every individual, and hence managing the cost of living has become a real challenge. Moreover it is brought to light that usage of fossil fuels has damaged the environment to a greater extent. Therefore the present study on fossil fuels made us realize that we should gradually shift to other renewable energy sources which has less impact on fossil fuels.

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# A STUDY ON THE AVAILABILITY AND USAGE OF REFERENCE SOURCES IN NAGODA NIDAHAS SWARNA JAYANTHI LIBRARY

#### B.D.L. Dilrukshi Kumari\*

Bachelor of Arts Hones Degree Programme, Faculty of Humanities & Social Sciences,
The Open University of Sri Lanka, Nawala, Sri Lanka
l.dilrukshi.kumari@gmail.com

### P.K.M. Kaushamalika

Senior Assistant Librarian, The Open University of Sri Lanka, Nawala, Sri Lanka pkkau@ou.ac.lk

### **Abstract**

Public libraries are institutions that provide lifelong information services to all citizens of a country. It also assists the development of the learning, awareness, and creativity of users. This study mainly aimed to investigate the usage of the reference sources in Nagoda Nidahas Swarna Jayanthi (NNSJ) public library. Specific objectives of the research were to find out the availability and adequacy of reference sources in the library, determine the extent of using reference sources, ascertain the purpose of using reference sources in the library, identify the challenges that users encounter while using reference sources. The study was conducted under the survey strategy using the descriptive research design. A self-administered questionnaire was used to collect data from a sample of 120 public library users among 500 active members.

The findings revealed that encyclopedias- dictionaries, handbooks/manuals, bibliographies, annual reports, and indexes are available in the reference section. Further, the study suggests providing proper guidance and awareness to the users to increase the usage of reference resources through effective orientation programs, workshops, and distributing handbills and newsletters to the public.

**Keywords:** Public library, Reference Sources, Reference Services, Usage, Nagoda Nidahas Swarna Jayanthi Public Library (NNSJ)

\*Corresponding author Abstract No. ICULA2021 K2

### Introduction

Public libraries provide access to knowledge, information through various sources and services. The public library is equally accessible to all members of the community. The primary purpose of the public library is to provide resources and services to meet the needs of individuals and groups for education, information including recreation and leisure. They have a critical role in the development of society by giving individuals access to a wide range of knowledge, ideas, and opinions. IFLA/UNESCO (1994), has defined the public library as; "the public library, the local gateway to knowledge provides a basic condition for lifelong learning, independent decision making and cultural development of the individual and social groups" (p.1)

Reference services have traditionally played a crucial role in the delivery of library services, especially in the academic sphere. Reference services without information & communication technology facilities will move and operate at a very slow pace; forcing potential users to patronize different sources other than the library to meet their information needs (Peter, 1974).

The Public Library of the Nagoda Pradeshiya Sabha (NPS) was established in 1970 during the Gam Sabha period. The annual fund allocation by the Pradeshiya Sabha is used to procure essential resources for the library. However, it is questionable whether many users effectively use these reference sources as it costs a large sum of money when purchasing these resources. Hence, NNSJ explored the awareness of users and the strength of these library reference resources in meeting users' information needs. Furthermore, this study helps to understand the difficulties in obtaining the required reference sources from the NNSJ Public Library and make decisions on overcoming these obstacles. Hence, this study examined the availability and usage of reference sources in the NNSJ library.

# **Objectives**

The main objective of this study was to evaluate the availability and usage of reference sources among the users in the reference section in the NNSJ public Library.

Based on the research problem developed above, the following research objectives were derived in terms of the NNSJ public library.

- 1. To find out the availability and adequacy of reference sources in the library
- 2. To determine the extent of usage of reference sources.
- 3. To ascertain the purpose of using reference sources in the library.
- 4. To identify challenges faced by users while using reference sources.

# Methodology

A survey was conducted using a self-administered questionnaire. The questionnaire contained twenty closed-ended and one open-ended question, which was used to assess the availability of sources and the usage of the reference section. According to Crejice and Morgan's table, a sample of 217 users should take into consideration. However, due to the prevailing coronavirus pandemic, the number of people who use the library's reference section has reduced. Hence, a sample of 150 users was selected during this study using the convenience sampling method. Pre-tested questionnaires were distributed among 150 active members of the NNSJ library during the COVID pandemic. One hundred and twenty members responded to the questionnaire, and the response rate was 80 percent. Data were analyzed in MS Excel 2019 using descriptive statistical techniques.

# **Results and Discussion**

The response rate of the study was 80% (120 respondents). The structured questionnaire contained twenty-one (21) questions, seven (7) demographic questions, and fourteen (14) questions to capture the objectives of the study. Of 120 respondents, all used reference sources in NNSJ public library, and more of them were female users (Female 71% and Male 29%). Moreover, the mainstream of respondents was Sinhalese (78%), and there were few responses from Tamil (15%), Muslim (6%), and other races (2%). It was proved that the young generation engages more in reading books and visiting the NNSJ public library when considering the age group. Among the respondents, more of them were non-employed (30%) while the rest there were government employees (26%), private employees (24%) and, twenty percent (20%) of self-employed users.

Table 1 shows the available reference sources in the NNSJ library. It was found that Dictionaries (30%) and Annual Reports (20%) were the most available resources in the library.

Table 1: Available reference sources in the NNSJ library

Reference sources	Availability	Percentage (%)	
Dictionaries	30	30 %	
Glossaries	10	10 %	
Encyclopedias	05	05 %	
Handbooks	15	15 %	
Bibliographies	15	15 %	
Annual Reports	20	20 %	
Indexes	05	05 %	
Total	100	100 %	

According to Table 2, eighty-one (81%) of those who inquired about the adequacy of the reference sources said that the reference sources were insufficient.

Table 2: Adequacy of reference sources in the library

Adequacy of Reference	No of Responses	Percentage (%)
sources		
Adequate	7	6
Slightly	16	13
Not adequate	97	81
Total	120	100

Dictionaries are the highly used (79%) reference source in this study (Table 3). However, Dictionaries (36.37%) and encyclopedias (27.28%) were highly rated reference resources in a survey conducted in the Nigerian public library when compared. (Doo & Murtala, 2015.)

Table 3: Extent use of reference sources

Reference sources	No of responses	Percentage (%)
Dictionaries	95	79
Glossaries	42	35
Encyclopedias	36	30
Handbooks	25	21
Bibliographies	19	16
Annual Reports	15	13
Indexes	18	15
Total	250	100

Table 4: Purpose of using reference sources in the library

Reference sources	No of responses	Percentage (%)
To write assignment	28	23
To write some examinations	31	26
To support lecture notes	42	35
For the development of	15	13
knowledge	'	1
For leisure	04	03
Total	120	100

Readers use reference sources that are available in NNSJ Library for various purposes. As shown in Table 4, the majority, thirty-five percent of respondents (35%), use these reference sources to prepare lecture notes. Of the rest, 31 respondents (26%) used it for examination purposes, and 28(23%) used it for writing assignments.

Table 5: Challenge encountered when using reference section

Challenges	No of responses	Percentage (%)
Obsolete materials on shelves	15	13
Improper organization of materials	20	17
Inadequate reference materials	22	18
Poor searching skills	25	21
Insufficient reference librarian to assist	14	12
Poor infrastructural facilities	24	20

Readers have been facing various challenges when using the reference section of the Library. According to the results shown in Table 5, almost all readers face different challenges. Poor searching skills (21%) and lack of infrastructure facilities (20%) were the two main challenges faced in this study. A similar study conducted by Quadri and Abiodun (2017) also showed that poor power supply 61(63.5%) and old and irrelevant reference sources for their courses 51(53.1%) constitute the major challenge confronting the respondents in using reference sources and services. Furthermore, Doo and Murtala (2015) also pointed out that the problems with the use of reference sources are mainly the lack of skills to use resources and services 52(47.27%) and the lack of knowledge about existing resources and services 20(18.17%).

### **Conclusion and Recommendations**

According to the present study, it is clear that there are dictionaries in the library. Dictionaries, as well as glossaries and encyclopedias, are widely used reference material identified in this study. The majority (81%) of respondents' opinion is that the resources are inadequate for their needs. Furthermore, it is revealed that the readers mainly use reference sources to complete their lecture notes, preparing for their examinations, and collect additional materials required for their assignments. Based on the findings of this study, the following recommendations were made to develop the reference section of the NNSJ library and improve users' information searching skills and needs.

- 1. Public libraries within the NPS are recommended to be well funded by the regional government to provide all the materials they need. Also, the Librarian should try to obtain new reference sources covering all the courses of the NPS, in consultation with the top management.
- 2. In this study, it was found that the information searching skills of users for finding the information sources were not adequate. Hence, the library staff should humbly help users find the sources of information and facilitate training programs, workshops, and library tours to create user awareness and develop users' information searching skills.

3. Information sources should be organized and shelved using an accepted standard method to facilitate users with an easy way of finding information.

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# CAPACITY BUILDING PROGRAM FOR TEACHER LIBRARIANS IN AKURESSA ZONAL EDUCATIONAL AREA, SRI LANKA: EXPERIENCE RECAP

I.D.K.L Fernando\*

Senior Assistant Librarian, Main Library, Sabaragamuwa University of Sri Lanka, Belihuloya, , Sri Lanka

kusala@lib.sab.ac.lk

U. A. L. Pannila

Senior Assistant Librarian, Main Library, University of Ruhuna, Matara, , Sri Lanka ualal@lib.run.ac.lk

### **Abstract**

School libraries should be properly monitored and enriched with well-trained teacher librarians. It would be an immense strength to achieve the development goals of the country. However, previous literature highlighted that there is a lacuna towards the attention of school libraries and training needs of teacher librarians. Present study is aimed to present the outcome of a capacity building program conducted for teacher librarians of the Akuressa educational zone of Sri Lanka. Present study summarises new concepts that 51 teacher librarians learnt, and aspects that they are confident in implementing as prospective activities in their schools. It can recommend conducting capacity building programs frequently with proper monitoring and disseminate the outcomes to the librarian's community. Depending on the feedback of the participants and results, it can suggest that conducting capacity building programs in a cyclic manner is better than conducting instructor-led trainings occasionally. Similarly, the outcome of the present study can be monitored, and the next outreach activity can get insights from the experience learnt from the present capacity building program. At the same time, policy makers and educational authorities must pay enough attention towards the wellbeing of school libraries and the quality of teacher librarians in the country.

**Keywords**: capacity building, teacher librarians, school librarians, library outreach programs

\*Corresponding author
Abstract No. ICULA2021 K3

# Introduction

The International Federation of Library Associations and Institutions defines the school library as "school's physical and digital learning space where reading, inquiry, research, thinking, imagination, and creativity are central to students' information-to-knowledge journey and to their personal, social, and cultural growth" (IFLA, 2015, p. 16). The definition covers most of the key aspects of a school library and it highlights the value of the school library service to the development of a country. It is questionable that how far the Sri Lankan schools have identified the value of a school library. However, it has led towards granting a huge responsibility to a teacher librarian to full fill the information needs and quality of the students' education. IFLA defines the teacher librarian "is responsible for the school's physical and digital learning space where reading, inquiry, research, thinking, imagination, and creativity are central to teaching and learning" (IFLA, 2015, p. 25). According to the Australian School Library Association (ASLA), a teacher librarian is "a person who holds recognized teaching qualifications and qualifications in librarianship [...]" (Australian School Library Association, 2021, p. 1) and highlighted three main roles of a teacher librarian as a curriculum leader, information specialist, and information service manager. Thus, the role of a teacher librarian serves an enormous responsibility in the school and the life-long learning process of students and staff. On the other hand, Herring (2007) explains the teacher librarian as a multi-faceted role player with 11 main roles. However, the term teacher librarian/school librarian in Sri Lanka is used to denote a "person who is in charge of a school library, irrespective of whether he or she is a qualified librarian, a teacher, a clerk, or a volunteer" (Yapa, 1998, p.9). Thus, there is a possibility that any teacher can become a librarian rather than a teacher becoming a librarian after completing the required level of professional training.

Ministry of Education has declared four main types of schools in Sri Lanka to maintain easy management (Ministry of eduction, 2020). Those are 1AB, 1C, type2, and type 3. The classification of government schools is summarised in the Table 1.

Table 3: Classification of government schools in Sri Lanka

Type of	Structure
school	
1AB	Schools facilitating Science, Arts, and Commerce for G.C.E. Advanced level
	subject stream. (Some schools provide technology subject stream also)
1C	Schools facilitating Arts, and Commerce or one of those subjects for G.C.E.
	Advanced level subject stream. / Schools do not teach Science subject stream
	(Some schools provide technology subject stream also)
Type 2	Schools that teach for grade 1-11 or grade 1-9 or grade 6-11
Type 3	Schools only with the primary grades (grade 1-5) and teach only for grade 1-8.

Source: Ministry of higher education

Kuruppaurachchi (2009) identified two types of School libraries in Sri Lanka, Permanent libraries, and non-permanent libraries. A permanent library is a "separate place with adequate space according to the standard criteria of the Ministry of Education" and a nonpermanent library is a "room with some book cupboards, bookshelves or a small collection of books" (p.26). Different studies in the country have highlighted the current situation and the significance of the teacher librarian's role and the situation of school libraries in the country while highlighting the volume of research conducted in the county is not satisfied (Jayasekara, 2019). Similarly, most of the previous studies have highlighted the scarcity of resources, lack of training, and poor attention to school librarians in the country (Ayeshmantha & Yapa, 2020; P. K. Jayasekara & Senevirathna, 2017a, 2017b, 2017a; Pathirana & Yapa, 2020; Wickramanayake, 2016). Among them, as highlighted by Ayeshmantha & Yapa (2020) lack of trained teacher librarians is a major issue that affects in reaching the educational goals of the country. Thus, capacity building programs are very important in the development of nations' future generations. On the other hand, conducting capacity building programs is the best way that a librarian can use to promote and disseminate knowledge (Alahakoon, 2017).

# Study area

The Zonal educational area of the Akuressa zone is depicted in Figure 1. It includes, 1. Akuress, 2. Malimbada, and 3. Welipitiya sub areas. Number of schools of all grades and types are 47 for the Akuressa zone, 14 for the Malimbada zone, and 24 for the Welipitiya zone. All

the teacher librarians in these three areas were invited to take part in the capacity building program. The study area is selected for the study because the University of Ruhuna is conducting such outreach programs as a regular practice and there are previous such programs conducted in the Akuressa Educational (Jayasekara, 2019). The key areas to design the capacity building program was decided according to the experience gained from such previous outreach programs. The mutual understanding and relationship with the Akuressa educational administrators were

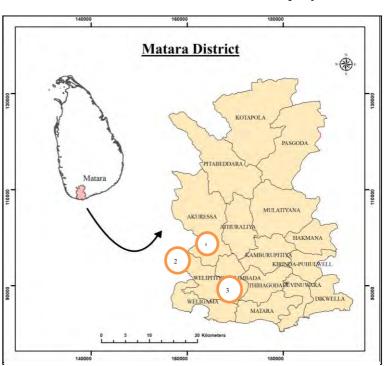


Figure 5: Divisions in Akuressa education zone, Matara

(Source: Geological surveys and mines bureau)

a strength to conduct this capacity building program. This educational zone also consists of different types of schools, including Kanishta Vidyala (type 2 and 3), Maha Vidayala (1C), Madya Maha Vidyala (1AB), and 01 National Schools among these schools, some of them are Navodya Schools, light house schools, Rural schools, Model/ Adarsha schools, and Piriven schools (Zonal Education office, 2021).

#### **Problem statement**

University of Ruhuna is the prime higher educational center of the southern part of the country. Community outreach is one of the main expectations of such institutions, to promote the teaching and learning of the country. Capacity building of teacher librarians in the southern region is a part of these outreach campaigns. However, the process of capacity building has been identified as a cyclic process, which includes, identification of training needs, awareness and training, monitoring, steps. So far, the library conducted the training component of this life cycle. Current capacity building program is the first such attempt of the capacity building life cycle, started in the usual way from the training component.

# **Objectives**

Present study aimed to share the outcomes, lessons learnt, feedback of a capacity building program conducted for teacher librarians of the Akuressa Educational Zone.

# Methodology

All the types of schools operate under the Akuressa Zonal office (85 schools) were informed and invited to take part in the capacity building program. A homogenous purposive sampling was practiced since the respondents are sharing some common types of characteristics. There were 51 teacher librarians participated in the capacity building program representing 34 schools. These 34 schools include 17 Kanishta Vidyala, 14 Maha Vidyala, 02 Madyamaha Vidyala and 01 National School. The capacity building program was arranged into two sessions, 1. Cataloguing, Classification, and Library Management session and the Modern teacher library practices with the introduction and implementation of new online services in school libraries. Each session extends up to four hours and a question-and-answer session was conducted at the end of the two sessions. A paper and pencil-based questionnaire were distributed among the participants to evaluate the capacity building program, to understand the lessons they learn and new aspects that are expected to be initiated at their schools once they are back.

#### **Results**

Results can be summaries into two main categories, 1. Things learnt from the capacity building program and 2. Things that are going to be implemented at their school libraries.

Participants of the capacity building program highlighted the lessons that they learnt from session one and two as depicted in Table 2.

Table 4: lessons learnt by the participants from the capacity building program

Lesson learned from the training	Number of respondents
Concept, foundation, and techniques of library classification	26
Adopting technology to the school library	21
Concept and technique of library cataloguing	20
Identified basic activities of a school librarian	12
Library management	11
Techniques to promote reading	5
Maintain the library accordingly	5
Promote creativity	3
Update knowledge	3
Promote self-learning	2
Explore knowledge	2
Update the library	2
Relationship with the students	2
Reading camps	1
Library monitor	1
Future challenges	1
Introduce new educational concepts	1

Source: Author compiled, 2021

Most (26) of the participants learnt the concept, foundation, and the techniques of library classification. 21 participants learnt about adoption of new technology to school libraries. 20 participants have newly learnt the concept of library Cataloguing while 12 have identified the role of the school librarians

Most of the participants has learnt the methods to promote reading, ways to adopt technology to school libraries, identified the objectives of a school librarian, basic concepts of library management. Attention to primary grade students was a new concept for the participants and 5 members who were assigned primary grades in their school has learnt what sort of attention could be given to the primary grades.

Table 5: Things to be implemented when the participants are back at their schools

Aspects to be implement when they back	Number of respondents
Methods to promote reading	27
Identify the objectives of the school librarians	24
Adopting technology to the library	21
Adopting basic concepts of library management	10
Special attention to primary grades	5

Schedule activities to done inside the library	5
Classification	5
Maintain library accordingly	4
Make the library an attractive place	4
Launch a library newsletter	4
Getting a computer	3
Reading competitions	3
Deploy a webpage to the library	3
Orientation programs to students	2
Attitude development towards school librarianship	2
Maintain staff-students relationship	2
Library representative form each class	2
Awarding to promote reading	1
Promote book writing	1
Try to renovate library	1
Promote softcopies	1
Promote creativity	1
Get more space to the library	1
Establishment of an outside library	1
Adopting social media to the library	1

Source: Author compiled, 2021

#### **Discussion and Conclusion**

Attention given to the school libraries by the authorities are poor in Sri Lanka (Ayeshmantha & Yapa, 2020; Jayasekara, 2019; Kuruppaurachchi, 2009; Wickramanayake, 2016). Kuruppaurachchi, (2009) highlighted that school libraries in some schools are limited to a small room in the school premises or to a few bookshelves kept in the corner of a school building. Therefore, most of the aspects that may be new to the participants and impractical for them to implement.

Dewey Decimal Classification system (DDC), its history, techniques were revealed at the capacity building program, since the DDC has been identified as the most popular classification system among school librarians of the country (Jayasekara & Senevirathna, 2017b). Even then, some of the librarians lack classification knowledge and they have adopted using their own method to classify the small number of books they have. Adopting a simple classification system is also being a practice among school librarians as reported by (Jayasekara & Senevirathna, 2017). Nearly half of the participants (26) learned new things in classification through the program and 05 of them were willing to implement DDC in their libraries. Also cataloguing was a new concept to 39% of the participants. There is evidence that most of the school libraries are not maintaining a library catalogue (Jayasekara et al., 2018).

Other key skills that were learnt by the respondents were adopting technology to the school library (41%), basic activities of a school librarian (23.5%), and concepts of school library management (19.6%). All the other concepts that are depicted in the Figure 2, were identified by equal or less than 5 members from the participants.

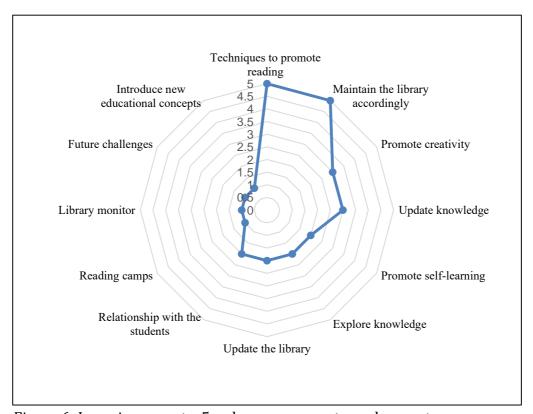


Figure 6: Learning aspects: 5 or less responses to each aspect

The closest reason for a smaller number of participants identified the concepts mentioned in the Figure 2 is that those are primarily school teachers and they have been appointed by the school administration or volunteers as teacher librarians. In some schools there were permanent teacher librarians but had been on leave due to other reasons. In such situations, a regular teacher is appointed as the librarian and these librarians are new to most of the concepts in library science.

While investigating the aspects that the participants willing to implement back at their schools, Methods to promote reading (27), Adopting technology to the library (21), Identify the objectives of the school librarians (24), and adopting basic concepts of library management (10) were reported by more than 5 respondents. It interprets that these librarians have developed the confidence through the capacity building program to accept the challenge of school library development. All the other aspects, the respondents obtained confidence, yet the majority who were not willing to implement these concepts may have

been due to other factors such as resources, school management commitment and infrastructure.

Five members out of 51 were related to junior schools who maintain a library for primary grades. Attention to the primary grade libraries is poor as reported by Pathirana & Yapa (2020). Present capacity building program may shed light on these participants from primary grades to implement a better junior library in future. Pathirana & Yapa (2020) also highlighted that lack of trained teacher librarians for the primary grades is evident as a major deficiency that affects the quality of school library services for juniors.

All the things learnt and willing to implement parameters that are depicted in Tables 2 and 3 can be utilized as inputs or training needs of school librarians of the region. If the same educational zone is benefited with a new capacity building program, it is better to monitor the progress of the aspects mentioned in Table 3. The lessons learnt, what went wrong, or success stories can be used as inputs to future such training programs in the country when the experience is communicated within the librarian's community. It is also a responsibility of the zonal educational officers in Sri Lanka to develop school libraries by providing supervision, guidance, evaluation, and awareness (Kuruppaurachchi, 2009). Relevant officials can promote library and information science training for the teacher librarians in their educational zones and there are number of universities and institutions comprising of trainings. These sort of top to bottom or bottom to top approaches of capacity building can be enriched through the mutual relationship between academic librarians and school librarians in the desired parts of the country.

#### **Recommendations**

It is pivotal that capacity building programs should be conducted with adequate monitoring and in a cyclic manner. Outcomes of such capacity building programs should be communicated within the librarian's community that shall be benefited to the other teacher librarians in the country through similar activities. School administration should take policy level decisions to create dedicated carder for school librarians and provide them with necessary professional training as teacher librarians.

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# UNDERGRADUATES' SATISFACTION ON SERVICE QUALITY OF LIBRARY SERVICES OF SOUTH EASTERN UNIVERSITY OF SRI LANKA

B. E. S. Bandara\*
Assistant Librarian, South Eastern University of Sri Lanka, Oluvil, Sri Lanka
esbandara@seu.ac.lk

M. M. Mashroofa, M. M. Rifaudeen, M. C. M. Azwer, A. M. Nahfees, S.L.M. Sajeer South Eastern University of Sri Lanka, Oluvil, Sri Lanka

#### **Abstract**

The main objective of this study is to examine the Undergraduates' satisfaction with library services of the South Eastern University of Sri Lanka (SEUSL), using a customized LibQUAL tool. The study further explores how patrons engage in the SEUSL libraries as part of their learning and determines the level of user satisfaction. Data were collected from undergraduate students of the Faculty of Technology and the Faculty of Applied Sciences of SEUSL from March to October 2020 using the stratified random sampling technique. sample of 285 was drawn out of 1100 undergraduates. A customized version of a LibQUAL model was used. Quantitative data were obtained using an online questionnaire and the descriptive analysis techniques adopted. Four independent variables such as "effect of service", "library as a place", "access to information" and "information control" were evaluated adopting criteria of the LibQUAL tool. The findings revealed that effect of service dimension shows the major impact on service quality and users are satisfied with the ten measures of the four constructs rendered by the SEUSL libraries. It is recommended to enhance the leisure reading facilities and 24 hours open section, article delivery and literature support service, nonprinted documents, e-journals and full text databases. Furthermore Inter library loan facilities, orientation programs and plagiarism support services also need to be strategized into an innovative manner.

**Keywords:** Modified LibQUAL tool, Service Quality, User Satisfaction, University library Usage, User requirements

\*Corresponding author Abstract No. ICULA2021 B1

#### Introduction

One of the fundamental goals of any library or information center is to meet the information demands of its users. Libraries must be arranged effectively and efficiently to provide quality services to their users in order to satisfy their academic and research information requirements. South Eastern University of Sri Lanka (SEUSL) libraries are always striving to provide quality service to their patrons. Even though library provides many services for uplift users information needs, Libraries continuously need to evaluate their services to ensure they meet the needs of all patrons. Measuring library service quality is important for continuous improvement of quality services to meet ever-increasing diversified needs of library users.

Traditionally, library evaluations centered on tracking circulation history, counting library visitors, and assessing physical resources like the number of books, periodicals, and other reading materials. Gradually, this method of study has evolved to evaluating library service quality.

There are arguments regarding this concept of evaluating library services. Ambrozic (2002) indicated that statistical data can be used to measure library activities, workload, collection, users, income and outcome) but not the library's performance or the impact of library services. In 1978 Lancaster described library evaluation should be done to assess the effectiveness, cost-effectiveness and cost-benefit analysis. Even in this method of evaluation, the perspectives of librarians as well as the library staff members were considered. After all, it was widely accepted to consider the perceptions of customers in assessing the quality of any services or organizations. Customers' viewpoints are very essential to evaluate library services, too. Dervin Nilan (1986) emphasized including the perceptions of users in library evaluation.

Becker et al. (2017), in their paper stated that the importance of quality assessment in libraries as "Academic libraries are constantly evaluating the level of user satisfaction with library services, including both the services provided by specialist staff and general access to library facilities and materials (within the library and online). In support of this constant demand for feedback, a variety of tools has been developed to assist libraries to determine service quality. One of these tools is LibQUAL+, a web-based survey that contains twenty-two predetermined questions and focuses on service provision, information control and the library as a place. The use of the survey allows libraries to benchmark themselves against other similar libraries. Such comparative data enables libraries to identify areas for improvement, best practice and resource allocation"

SEUSL has six faculties and the library of SEUSL is catering to the information needs of students of all the faculties and therefore it is crucial to understand the quality of the services and the satisfactory level of users, especially of the undergraduates. SEUSL libraries have a little recorded information on this aspect. Therefore, it is timely needed to identify the user

satisfactory level so that the library can provide a better quality service in the future. Based on this problem the following objectives were formulated.

The main objective of this study is to examine the undergraduates' user satisfaction through the customized LibQUAL tool at the libraries of the South Eastern university of Sri Lanka.

# **Research Questions**

The research seeks to answer the following research questions:

- 1. What is the undergraduates' satisfaction on the library facilities of the SEUSL libraries?
- 2. What are the factors that contribute to the user satisfaction of the SEUSL libraries?

#### Literature Review

According to Hernon and Nitecki (2001), there are many reasons why libraries are interested in service quality. Most libraries are attached to a certain parent institution such as universities, government agencies, schools, etc. Customer feedback is also important to provide better service since it identifies the gap between service provided and expectations. This identification helps the libraries to provide a better service to their patrons.

Service quality was defined as "the overall evaluation of a specific service firm that results from comparing that firm's performance with the customer's general expectations of how firms in that industry should perform" (Parasuraman et al., 1988). This definition applies to academic libraries as academic libraries provide specific services to their patrons. This particular study is also following the second definition as the main objective of this study is to evaluate the service quality of the SEUSL libraries based on the users' satisfactory level.

Service quality was evaluated by using several criteria. As per Lancaster (1978), the evaluation criteria consist of three tiers. They are; Effectiveness, Cost-effectiveness and Cost-benefit. In his study, Lancaster (1978) defines 'effectiveness' as "how well the system is satisfying its objectives". After measuring the effectiveness the cost incurred for offering the particular service is considered to examine the cost-effectiveness. Then cost-benefit is done as effectively and benefits are not the same. In this case, he defines cost-benefit as "evaluating a service based upon the cost compared to the benefits provided through that service". In this method, customers' perceptions or expectations were not given attention.

Armstrong (1991), introduced some other criteria such as accessibility, responsiveness or timeliness, reliability or accuracy and relevance, non-threatening behavior/friendliness and helpfulness, communication or easy to use, assurance or reliability and consistency, affordability, tangibility. Though this study consists of customer attributes, a few more essential criteria were missing, especially user satisfaction level related to collections, services and physical facilities. Hayden et al. (2005), has utilized library usage and collections, library access, working environment, ICT and computer facilities, services and customer

satisfaction and priorities while evaluating the service delivery of their libraries. Several other authors have used various criteria depending on their needs. However, librarians and researchers required a standard tool to evaluate the service quality of libraries. The rest of this section describes the evaluation tool.

Parasuraman et al. (1998) identified five dimensions, each of which has included several antecedents to evaluate the service quality of any institution. These dimensions are given below with their definitions.

Table 1. Dimensions to evaluate service quality

Variables	Definition
Reliability	The ability to perform the promised service both dependably and accurately
Responsiveness	The willingness to help customers and to provide prompt service
Assurance	The knowledge and courtesy of employees as well as their ability to convey trust and confidence
Empathy	The provision of caring, individualized attention to customers
Tangibles	The appearance of physical facilities, equipment, personnel and communication materials

Based on the five dimensions Parasuraman et al. (1998) developed a tool known as SERVQUAL. SERVQUAL protocol is widely used to evaluate service quality across the world. However, to make this tool well fit with evaluating library service quality, the Association of Research Libraries (ARL) adapted SERVQUAL and named the derivative tool LIBQUAL which contains 22 items under four dimensions. Those are, affect of service, information control, library as a place and access to information. LibQUAL+™ is adapted from LIBQUAL with a few additional attributes to examine the link between service quality, satisfaction, and loyalty of university libraries. Evaluating service quality of Web content was developed by Kiran and Diljit (2012) known as LibWebSQ. A few Sri Lankan universities have evidence of publications for evaluating service quality (Jayasundara, 2010; Somaratna and Peiris, 2011; Gunawardhana, 2016) by using different approaches. SEUSL libraries followed the LibQUAL tool and customized it according to the needs of the parent entity to evaluate user satisfaction.

# Methodology

This study used quantitative research approach and distributed online questionnaires for the data collection. Stratified random sampling method was adopted to select the sample. Two faculties were purposively chosen at Oluvil and Sammanthurei premises. The population of

the research consisted of all undergraduate students (1100) of the Faculty of Technology and Faculty of Applied Sciences of SEUSL. Using the Krejcie and Morgan table identified the minimum sample size of 285 for the study. Received responses are given in the following table. All the responses were considered for the analysis.

Table 2. Sample Distribution

		Minimum Sample	Received Responses
Faculty	<b>Population</b>	size	
Faculty of Applied Sciences	620	198	222
Faculty of Technology	480	152	183

A pretested self-administered questionnaire that included quantitative data were analyzed based on the research questions by using descriptive analysis methods. Respondents were asked to rate their satisfaction level (Table 3) on a five-point Likert Scale; from 1 –"Strongly Disagree (SDA)" to 5 –"Strongly Agree (SA)".

A few more situational attributes were evaluated such as Internet/ Wi-Fi connectivity, opening hours, etc. This is a longitudinal study at the first survey, we did not go for a gap analysis of the user's expectations and the perceived level.

#### **Results and Discussion**

The majority of the respondents were 2<sup>nd</sup>-year students (43%) followed by 1<sup>st</sup> year (25%), 3<sup>rd</sup> year (29%) and 4<sup>th</sup>-year students respectively. Out of this, 69% were female students. 72% of the total respondents have been obtained library membership and others were not members at the time of conducting the survey. Therefore while screening the data responses of non members were not taken into analyse the satisfaction level. Respondents' frequency of visiting the library is at least once a week (31%). 91% of the respondents received the library orientation program where the rest of the respondents were not able to attend the program. The Library of SEUSL conducts the library orientation along with the common orientation program of the University, but 42% of the respondents stressed that the best time to conduct an orientation program is at beginning of the academic session. 41% agreed to have the library orientation program along with the common orientation program.

According to Owusu-Manu (2017), Moohammad (2014) and Alston and Miller (2002) have applied the mean value to evaluate the satisfactory level of services. We've used Alston and Miller (2002), benchmark to determine the satisfactory level of the services of SEUSL libraries.

Therefore, the following table 3 depicts how the value allocation of Alston and Miller (2002), aligns with the likert description of the tool used for this study. Based on this, 3.5 to 4.49 and 4.5 to 5.0 were interpreted as satisfied and highly satisfied.

Table 3. Likert Scale Interpretation

Likert	Likert	Value	Likert	Likert Description	Value Allocation
Scale	Description	Allocation	Scale		
1	Not at all	1.00-1.49	1	Strongly Disagree	Highly
					Dissatisfied
2	Slightly true	1.50-2.49	2	Disagree	Dissatisfied
3	Moderately	2.50-3.49	3	Not Aware/ Neutral	Neutral
	true				
4	Mostly true	3.50-4.49	4	Agree	Satisfied
5	Completely	4.50-5.00	5	Strongly agree	<b>Highly Satisfied</b>
	true				
•	,	•		·	

Table 4 shows that the five constructs used in the tool have included 34 measures. Among the 34 measures, there are 10 measures which have reached a mean value of 3.50 and more. This result indicates that undergraduate users are satisfied with these 10 measures. Among the five constructs, no construct has reached the benchmark of satisfactory. Almost all the variables were able to reach satisfactory level because the average mean values for the variables fall between 3.321 and 3.449 which are approaching the bench mark. However, the overall satisfaction of the undergraduate users (3.51) have reached the benchmark for satisfactory.

Table 4. Factors evaluated for service quality

	SA	A	NA/	DA	SDA	Mean
			N			
Library as a place (LP)						3.42
						3
The physical facilities of the library are	26	44	11%	10	9%	3.67*
visually appealing	%	%		%		
Usage of leisure reading area	10	47	22%	10	10	3.37
	%	%		%	%	
Usage of 24 hours area for my studies	11	38	27%	12	12	3.23
	%	%		%	%	
Access to information (AI)						3.42
						8
Convenient library working hours	18	45	12%	12	13	3.42
	%	%		%	%	
Properly arranged printed materials	23	42	16%	9%	10	3.6*
	%	%			%	
Proper maintenance and automated library	<b>15</b>	45	21%	9%	9%	3.47
functions and services	%	%				
Article delivery and literature support	7%	40	32%	9%	12	3.22

services		%			%	
Information control (IC)						3.39
						4
Having good collection of printed documents	21	46	15%	7%	12	3.56*
	%	%			%	
Having good collection of non-printed	5%	28%	39%	18	10	3
documents				%	%	
User friendly online catalogue (OPAC)	16	43	22%	9%	10	3.46
	%	%			%	
Subscribed e-journals and full text databases	9%	40	33%	9%	9%	3.31
		%				
Stable internet connection	23	38	18%	10	11	3.53*
	%	%		%	%	
Availability of library resources on website	16	43	23%	9%	9%	3.49
	%	%				
Online reservations	16	37	28%	10	9%	3.41
	%	%		%		
Affect of service (AS)						3.44
						9
Useful signage	21	48	14%	8%	9%	3.65*
	%	%				
Inter library loan facilities	7%	26%	38%	17	11	3
				%	%	
Error free library records	9%	38	36%	10	8%	3.3
		%		%		
Delivering promised services on time	14	43	26%	8%	9%	3.44
	%	%				
Willingness to help users	19	46	18%	6%	10	3.59*
	%	%			%	
Proper guidance to the resources	11	49	22%	10	8%	3.44
	%	%		%		
Library staff instill trust/confidence	19	44	20%	7%	9%	3.58*
	%	%				
Understandability on specific needs	17	43	19%	10	10	3.47
	%	%		%	%	
Library staff knowledge to answer user	17	45	20%	9%	10	3.5*
queries	%	%			%	
Cooperative library staff and always pay due	16	<b>47</b>	19%	7%	10	3.52*
attention to information needs and problems	%	%			%	
of users Library dearly gives instruction regarding the	10	40	220/	(0/	10	2 47
Library clearly gives instruction regarding the	12	48	23%	6%	10	3.47

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use of its information products and services time to time	%	%			%	
Easy to reach senior staff whenever need to contact them for any information	13 %	47 %	22%	7%	12 %	3.43
Other factors (OF)						3.32
						1
Usage of the Institutional repository of SEUSL	9%	40	31%	10	10	3.28
		%		%	%	
Usage of E-resources subscribed by UGC for	9%	33	35%	14	9%	3.19
research works		%		%		
Awareness on plagiarism detection support	7%	<b>35</b>	35%	12	10	3.17
		%		%	%	
Obtain knowledge through Information	12	46	24%	7%	10	3.42
Literacy course	%	%			%	
Staff allocation is satisfactory to support my	13	48	22%	9%	8%	3.49
requirements	%	%				
Orientation program helped to understand	7%	<b>34</b>	25%	20	13	3.02
library system and resources		%		%	%	
Awareness of classification system using at	14	48	21%	8%	9%	3.49
the library	%	%				
Overall satisfaction on services provided	16	48	18%	9%	10	3.51*
	%	%			%	

 ${\bf SA}$  – Strongly Agree |  ${\bf A}$  – Agree |  ${\bf NA/N}$  - Not Aware/ Neutral |  ${\bf DA}$  - Disagree |  ${\bf SDA}$  – Strongly Disagree

If we consider **library as a place** construct, among the three measures, only 'physical facilities of the library are visually appealing' measure scored satisfactory benchmark. In the **Access to information** construct, respondents were satisfied only with the arrangement of printed materials whilst **information control** construct scored two measures namely good collection of printed documents and stable internet connection as satisfactory. **Affect of service** construct is the largest construct with 12 measures and among them 5 measures namely 'having useful signage', 'willingness to help users', 'library staff instill trust/confidence', 'library staff knowledge to answer user queries', 'cooperative library staff and always pay due attention to information needs and problems of users' were in the satisfactory level. However, the average mean value of this particular construct too did not reached the benchmark of 3.5 but with a value of 3.449 emphasizing that it is reaching towards the benchmark. **Other factors** construct with 8 measures and out of that only 'overall satisfaction on services' measure was scored satisfactory level.

#### **Conclusion**

Based on the responses given by the users, it is clear that SEUSL library has to improve many measures to uplift the user expectations and to provide a better service to its stakeholders. Affect of service dimension ranked as the most satisfied dimension. Where the information control dimension ranked as the least satisfied dimension. Further, it is recommended to conduct user education programs on the lacking areas such as inter library loan facility and non-printed materials available at the library and more attention to information controlling aspects in order to further maximize the quality of service offering to the users. Further, it is recommended to enhance the leisure reading facilities and 24 hours open section. Article delivery and literature support service, non-printed documents, e-journals and full text databases also need to be improved. Furthermore Inter library loan facilities orientation programs and plagiarism support services also need to be strategized into an innovative manner.

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# ADDING ALTMETRIC DOUGHNUT: PROPOSAL TO INCREASE AUTHOR VISIBILITY ON UNIVERSITY REPOSITORIES IN SRI LANKA

#### M.N. Ravikumar\*

Senior Assistant Librarian, Eastern University, Chenkalady, Sri Lanka ravikumarmn@esn.ac.lk

#### T. Ramanan

Senior Assistant Librarian , Faculty of Technology, University of Colombo, Sri Lanka ramanan@lib.cmb.ac.lk

#### **Abstract**

Sri Lankan universities have developed their institutional repositories to promote communications of research findings among stakeholders. At present, universities' strategic plans inevitably include measures and actions to increase the webometric rankings of the institution. This is partly achieved through accessible local research publications deposited on self-archived platforms. Despite, to what extent the research and publication reach the general public is the question. Most of these repositories use in-built metrics, visible only to administrators and registered users who can view the number of downloads and data as such. However, those analytics do not show the visibility of research among the general public except for the system/database administrators. However, the paradigm shifted a few years ago to adopt a holistic bibliometric to evaluate the research's impact on society. The majority of laypeople are active on social media and do not have access to almost any scholarly resources available via expensive subscriptions. At this point, the authors propose Altmetric tools to expand the author's visibility on non-scholarly platforms such as mass and social media. Almost all university libraries in Sri Lanka, run their repositories on DSpace open-source software. Altmetric badges can be embedded into DSpace through the proper configuration. By adding an Altmetric widget, popularly known as Altmetric doughnut, the visibility of publications is expected to increase author's visibility and his/her work on other platforms, especially on social media. In this regard, the study proposes possibilities to incorporate freely available webometric tools to make the research visible and viable in society. An extensive research project will be planned and executed to assess the technical compatibilities, challenges, and prospects of adding Altmetric tools to the Sri Lankan university repositories.

Keywords: Altmetric tools, DSpace, Institutional Repositories, Author Visibility

\*Corresponding author Abstract No. ICULA2021 R2

#### Introduction

Institutional repositories tremendously support open access initiatives thus deposited materials of academics and researchers are expanded in their visibility and increased citations. Nevertheless, being visible among academia is not to exert a research impact on society (Aguillo, 2020). Therefore, it is realized that research findings ought to reach a larger audience, especially on social media.

Besides, institutional repositories are significantly essential for the visibility of local literature (Saini, 2018). This would strengthen interfaculty and university collaboration in action research in Sri Lanka. In this regard, local literature has to reach the laypeople and community for an effective impact of continuous research hence research should reach deeper levels of society.

In parallel to increasing visibility, universities are striving to establish their reputation and university administrators are curious about trying the latest measures to present their university's impact of the scholarly output on society. In this line, adding Altmetrics or alternative metrics to digital repositories help universities to add value to local research publications in this electronic era (Konkiel & Scherer, 2013). Hence, the authors of this proposal explore the possibilities of embedding such holistic tools to increase the visibility of scholarly communications generated by Sri Lankan universities.

According to Konkiel and Scherer (2013), repositories generally produce statistics on downloads and views, however, it is equally important for them to measure the citation counts harvested from social networking sites where Altmetrics tools are important. Meanwhile, usage statistics using Google Analytics can be effective, however; those statistics are accessible only to the repository administrator but not visible on the repository's interface in Sri Lanka. In this regard, Altmetric doughnut facilitates, if integrated with university repositories, the visibility of research from the general public's point of access.

# What is Altmetrics?

Altmetrics is nothing but alternative metrics to measure the citation impact of research publications, especially their mentions on social media. Priem et al (2010) elaborate that this venture gives new facets for analytical metrics for scholarly communications. Altmetrics present a wider and more heterogeneous spectrum of measures. In his work, Aguillo (2020) cites the sources from which Altmetrics reaps its data. It draws data from reference management systems, self-archiving platforms, and social media like YouTube and Twitter. Moreover, Altmetrics is useful both at the article level as well as at individual levels, thus it has the potential to measure the research output beyond the scientific audience.

In this sense, the authors of this proposal explored the possibilities of exploiting Altmetric tools available on their official website. Interestingly, *Altmetric Score* is a holistic tool to display the impact of local research on Sri Lankan communities in general. In addition to that, there are free tools available on Altmetric.com, which are *Altmetric bookmarklet*, *Altmetric Explorer*, and embeddable institutional repository badges (https://www.altmetric.com/products/free-tools/).

### **Objectives**

To analyses the open visibility practices incorporated in Sri Lankan University Repositories in order to increase the research visibility among general public and academia locally as well as globally.

# Methodology

A web survey was executed on all the repository web pages of Sri Lankan universities to identify the platforms used to develop the repository, interface framework, and any Altmetric tools used in the repositories. The repositories with operational links have been taken into account and they were manually visited to assess their technical features and availability of metrics.

#### **Results and Discussion**

Based on the results the authors identified the source of the repository platforms, their interface structure, and availability of bibliometric tools.

Firstly, it has been found that almost all the university repositories in Sri Lanka have been developed on DSpace platform using the XMLUI framework except the University of Colombo which is using JSPUI. DSpace is open-source software with flexible configuration. The Software provides only a few metrics such as views based on geography, number of downloads, and search history with its customization. Unless enabled for a public view, those metrics are only accessible to the database administrator. In this survey, it was noticed that there were no visible usage statistics.

Secondly, it was observed that there are no metrics incorporated to show the number of citations for the holdings on the repositories visible to the web viewers/outsiders. In this regard, the authors have identified a need to incorporate alternative metrics to show the citations of research publications on social media. Altmetrics provide excellent analytics of citations on both scholarly and non-scholarly platforms like Twitter and YouTube. *Altmetric It*, which is individually installed and plugged into web browsers, was run for selected repositories to find if they were cited on social media. Articles with DOI (Digital Object

Identifier) had generated Altmetrics doughnut of metrics showing tweets, readership, and other social media citations. However, articles without DOI could not produce these metrics.

# **Integrating Altmetric analytics using IR badges**

As Mandal (2019) describes, DSpace is developed using high-level programming languages like *Java* which supports enabling Altmetrics discovery on institutional repositories. In this regard, *altmetrics.cfg* file in modules that come under the sub-directory of *config* of DSpace could be configured with the true necessary field to track various parameters specific to contributors. Therefore, the survey results showed the possibility of incorporating those metrics into the institutional repositories of Sri Lankan universities to evaluate the impact of research on society.

#### Conclusion

It has been strongly perceived that research impact is measured in terms of social changes. The social media presence of individuals is becoming stronger with technological advancements and easy access to the Internet. Hence, Sri Lankan research repositories need to evaluate how far those deposits reached the general public through social media. In this regard, the impact of scholarly publications deposited on Sri Lankan university repositories on society needs to be emphasized using Altmetric analytics.

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#### PAKISTANI LIS FACULTY RESEARCH PERFORMANCE ON RESEARCHGATE

#### Muhammad Yousuf Ali\*

Associate Librarian, Faculty of Health Sciences Library
The Aga Khan University, Karachi, Pakistan
usuf12@gmail.com

#### Abstract

Academic Scholarly Networking Sites (ASNS) ResearchGate (RG), Mendeley, Academia, Word Press, Google Scholar, etc. are the most popular networking sites among scholars, researchers and faculty members. ASNS platform is also a source of abstract, pre-print and post-print versions of digital scholarship from scholar profiles. This study analyses the top 10 LIS faculty member publications, RG score citations, research interest, and read. RG Score is one of the unique features of research reputation of the researchers. The role of RG seems to be an open repository, like promotion of publication, read views and count. There is a normal level of correlation between the publication and citations of the scholar with r=0.665. This study presents the analysis that how many papers are on open access with the original version and how many papers share just their preprint and how many papers uploaded with their abstract only. This study also helps the awareness of LIS scholars about the 46% article available on full text.

No previous study has been conducted in Pakistani LIS scholar's context regarding the coverage of open access, scholarly publishing and copyright access. Results are also helpful for the National/International LIS professionals in the context of scholarly communication.

**Keywords:** ResearchGate, Academic Scholarly Networking Sites, Scholarly Communication, Research Impact, Research Repository

\*Corresponding author (Abstract No. ICULA2021 A1)

#### Introduction

ResearchGate is one of the emerging and most popular networking sites among the scholars, researchers and faculty member. ResearchGate was launched in 2008 (Crawford, 2011). It has different unique features RG score, citation counts, publication full-text request to author, following in follower (Ovadia, 2014), within the passage of time different new features have also been added on this ResearchGate platform like research "interest of the publication" as well as "save list" added in 2019. Interesting and suitable articles of respective discipline could be recommended to scholars and researchers of respective domain of knowledge. Researchers can upload their publication full-text or abstract with bibliographical information as per the policy of the journal.

#### **Literature Review**

There are good number of literature produced about the researcher and scholars of different fields in different context. Popularity of RG among the scholars of various filed was discussed (Van Noorden, 2014; Ortega, 2015; Elsayed, 2016). Nicholas et al. (2016) have studied the correlation between the RG statistics and the academic institution ranking. ResearchGate performance compare through article age, discipline, audience size and impact study results shows that Medicine and pure science field article have good number of read and citation count (Thelwall & Kousha, 2017).

RG score is one of the unique features that attracted the scholars to join this networking site (Lepori, Thelwall & Hoorani, 2018). This study is based on RG score performance among the higher education institutions. Research Gate also manage the institutional RG score of the academic/research institutions. RG score shows that research reputation of a scholar/researchers but RG score measurement has a secret algorithm (Nicholas, Herman, & Clark, 2016).

In Pakistan 52.94% faculty member use as ResearchGate as scholarly networking sites for academic profile maintenance (Ali & Richardson, 2018). LIS scholars profile metric was presented by the (Ali & Richardson, 2017) but this study has mixed profile approach LIS practitioner and faculty members.

There is no study so far conducted about the specific context of LIS faculty member of Pakistan yet this study is an attempt to fill the gap of the literature.

## **Objectives**

The study attempts to analyse the top LIS faculty member's publications uploaded on ResearchGate with following objectives.

- 1) To measure the research performance on ResearchGate of Top LIS faculty members
- 2) To evaluate the popularity of their publications and profile on ResearchGate.
- 3) To determine the availability of open access papers on ResearchGate,

# Methodology

This is a quantitative study which analyses the top 10 LIS faculty member of Pakistan and their profiles. Analysis on the basis of existing data till 20 August 2021. Descriptive statistics applies on extracted data. Currently there are 12- Higher Education Commission (HEC) recognized Library schools that offer undergraduate BS LIS level education program. LIS faculty members' profiles were selected from these profiles. Profile selection criteria on the basis of publications of the faculty members.

#### **Results and Discussion**

Research publications, RG score, citations count, Research interest and read of the top 10 LIS faculty members are shown in the respective Table 1. However, RG score metrics is very less number of publication on Sr # 7, 53 publications have 17.27 RG Score and Sr # 3 having 87 publications with slightly higher 17.26 score. RG score have a complex and secret algorithm, beside the number of publication is not the only criteria for high RG score. Spearman correlation test was used to determine the correlation between the Publication and citations. Resulting r value was 0.66515 and p (2-tailed) was 0.02553, which shows statistical significance between the two variables.

Table 1. Publications, RG Score, citations, Research and Read

Sr#	Number of Research	Score	Citations	Research	Read
	Items			Interest	
1	223	31.32	2735	2411	151253
2	194	27.63	1363	1388	85292
3	87	17.26	281	408.3	21746
4	79	17.06	867	766	51170
5	71	20.2	346	461.3	33087
6	69	15.73	279	325.6	13304
7	53	17.27	398	531.7	46141
8	45	15.53	236	246.9	12664
9	45	15.22	159	210.4	12691
10	42	17.93	161	244.3	13028

Forty six percent (46 %) of the articles were available full-text and the rest of the articles had only the abstract and metadata information. However, reader can request to get full-text via e-mail. Results are tabulated in Table 2.

Table 2. Publications status - full text and abstract only

Publications	Numbers	Percentage (%)
With full-text	408	46
Only with Abstract	512	54
Total	948	100

Faculty members RG Score fall between the ranges from the 15.22 to 31.32, which means minimum score higher than 62.5% existing RG score. Average 7.57 citation per publications. Usually social science article has low citation rate compared to science articles published by various science academic disciplines (Thelwall & Kousha, 2017).

#### **Conclusion and Limitations**

LIS faculty members' profile reflects that they perform very well with good number of read and citation counts which shows the popularity of publications. RG score and research interest, found moderate level of popularity. LIS faculty member's profiles work as 'institutional repository' for the young scholars and they download the publication and as well request for full-text when not publicly available. LIS faculty members of other Pakistani LIS school also can join the ResearchGate and make their research performance visible to the scholarly world. RG also provide an avenue of Research collaboration among the local and international LIS faculty member and practitioners.

This study is limited to faculty members however further study can be conducted top LIS scholars include with LIS practitioner.

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# RESEARCH COLLABORATION IN LIBRARY AND INFORMATION SCIENCE: BARRIERS, CHALLENGES AND PROSPECTS

#### Amara Malik\*

Assistant Professor, Institute of Information Management, University of the Punjab
Lahore – Pakistan
amara.im@pu.edu.pk

#### Abstract

This qualitative study is aimed to explore the nature and extent of research collaboration among the faculty members in the field of Library and Information Sciences (LIS). It further identifies the challenges and future prospects of LIS research collaboration in Pakistan. The cultural of collaboration in LIS research is at it embryonic not stage that calls for examining the barriers, challenges and future prospects of collaboration in the country. Seventeen faculty members (professors, associate professors and assistant professors) from eight LIS departments were interviewed. Face-to-face and telephonic semi-structured interviews were conducted in this regard. The analysis of interviews revealed that there is a lack of research collaborative activities among LIS faculty members as well as departments. However, it was noticed that during recent years a culture of co-authorship particularly in research articles and among faculty members was emerging while other areas of research collaboration such as joint research academic programs, conferences, workshops, seminars, symposiums etc. However, it was noticed that faculty members were highly aware of the potential benefits of collaborative research activities. Their urge for developing liaison and collaboration is a positive indication that requires visionary leadership and committed efforts to ensure long term success. This study provides guidelines for creating a future growth of LIS research collaboration in Pakistan. Though this study is conducted in Pakistan, the findings may be extended to groom national, regional and international research collaborative activities in other countries with similar context.

It will serve as a guideline for further research, as it has addressed an untouched area and reports original research.

**Keywords:** Pakistan, Research collaboration, LIS Research, Faculty members

\*Corresponding author Abstract No. ICULA2021 M2

### Introduction

Research plays a pivotal role in the development of any profession or discipline by creating new theoretical knowledge and informing practice. Research is required for LIS faculty members to advance their career, and for practitioners to improve problem solving and decision making at work place (Powell, Baker & Mika 2002; Clapton, 2010). In this article, research is defined as a range of scholarly activities including research education (i.e. MPhil and PhD programs) and research publications (i.e. articles, commentary, practice descriptions, news items and opinion papers). Prior literature establishes the importance of collaboration in LIS education and research (Al-Suqri, 2010; Aytac, 2010; Khoo, 2013; Malik & Ameen, 2018). Sacchanand (2012) considered collaboration in LIS field is essential due to changing dynamics of higher education environment and shifting paradigm of LIS programs. The researchers believed that LIS collaboration in research can be formed amongst LIS departments within a country or internationally and regionally in areas such as teaching and training of research through student and staff exchange programs, organizing symposium, conferences, seminars and workshops, making available learning and teaching resources and other activities such as publications and research supervision (Abioye, 2014; Ocholla, 2008).

Pakistan is cherishing a historic legacy of LIS education as being third one in the world and first in Asia to offer formal seat of learning in the field at university level in 1915 (Kaser, 1992), when Asa Don Dikinson was appointed to conduct a training class of thirty working librarians at university of the Punjab (Lahore). In the succeeding year, he also authored the 'Punjab Library Primer', the first ever textbook of library education (Anwar, 1990; Kaser, 1992; Lang, 1968). Carrying on his legacy, LIS professionals continued to contribute subsequently though slowly to research literature (Haider, 2007; Naseer & Mahmood, 2009; Siddique, Rehman, Khan & Altaf, 2020). Nonetheless, research remained a low priority among LIS professionals until 2005 due to lack of research culture in the country. The commencement of the PhD programs with coursework in 2005 has a significant impact on LIS research. The last one and half decade has witnessed an upward increase in the curve of LIS research output, mostly conducted and reported by LIS faculty (Ahmad & Warriach, 2013; Jan & Anwar, 2013; Khurshid, 2013; Mahmood & Shafique, 2010; Naseer & Mahmood, 2009; Warriach & Ahmad, 2011). Recently, Siddique, Rehman, Kham and Altaf (2020) reported that LIS faculty produced more research- almost double compared to the LIS practitioners. Moreover, they also observed a lack of co-authorship trend. Previously, various studies have concluded that lack of collaboration among LIS faculty, department and librarians is the major hindrance in imparting quality research education and producing quality research output (Ameen, 2007; 2014; Malik & Ameen, 2018; 2021). However, no further study has investigated the reasons or factors working behind this less collaborative research culture in the country. This study is an attempt to fill the gap in this respect as well as to explore the views of LIS faculty to identify the barriers, challenges and future prospects of LIS research collaboration in the country.

# **Objectives**

The current study attempts to:

- identify the barriers that hamper research collaboration among LIS faculty in Pakistan
- find out challenges and future prospects of LIS research collaboration in Pakistan
- determine the strategies to improve LIS research collaboration among faculty members.

# Methodology

The author employed a qualitative approach for collecting views, experiences and insights of LIS faculty members to achieve the above-mentioned objectives. Qualitative approach was used as it enabled the research to get in-depth views of the participants regarding the phenomenon at hand. Semi-structured interviews were conducted with 17 faculty members from the pool of professors, associate professors and assistant professors who were selected using purposive sampling technique with the aims to pick "information-rich cases" with an assumption that they were experienced and well-aware of challenges and prospects of collaboration. After seventeen interviews, data collection was stopped due to data saturation. In interviews, data saturation is a point when the researcher begins to hear the same comments again and again. Face-to-face and telephonic interviews were conducted with these faculty members and recorded. They were provided with a choice to speak in English or Urdu to avoid language barrier. The interviews were transcribed from the digital recording carefully by reflecting audios again and again. A thematic approach was used to analyze the obtained data. After reading each interview transcript several times a list of codes was developed. The coded data was entered into MS Excel sheet. The demographic profile of the participants is presented in table 1 below.

**Table 1.** Demographic information of the participants

8 1	1 1
	Interviewees
Gender	
Male	13
Female	4
Designation	
Professor	2
Associate Professor	6
Assistant Professor	9
Age Range	
30-40	4
41-50	7
51-60	6
Experience	
Up to 10	3
11-20	6
21-30	6
31 and above	2

# **Findings**

All the participants were agreed that collaboration was the most overlooked aspect in local perspective. It is evident from the following comment of a participant, "There is lack of research collaboration in the country. There is no single instance where LIS department are working on for offering joint research programs or joint research supervisions and other activities such as conference, workshops etc. We have no culture of joint authorship in research publications even. A gap among LIS faculty, schools and practitioners is evident as well." (P1). A majority of the participants (n = 14) shared their observation regarding lack of socialization and collaboration among various LIS departments and faculty particularly, in terms of research projects. "We (LIS faculty) stick to our ponds" (P3). Similarly, they reported that a few research papers were published in the co-authorship of LIS faculty or within and outside of their departments and universities. However, a few participants (n = 3) pointed out the changing trend of doing and publishing research in co-authorship. "A trend of joint authorship and co-authorship within the discipline and outside of the discipline is also emerging but at a very slow pace" (P14). Another stated, "There is no such evidence where we have taken some industry issue as an academic research project or any PhD or MPhil research that is sponsored by industry" (P13).

# **Barriers and Challenges of Building Successful Collaboration**

All the interview participants (n = 17) mentioned a number of challenges in developing and implementing collaborative LIS research programs and publications and initiatives which were categorized into two groups; material resources and collective behavioral factors.

Challenges related to material resources comprised poor infrastructure, shortage of faculty in LIS departments, and lack of funding. The challenges related to behavioral factors included lack of awareness about possible advantages of collaboration, unwillingness to share information or expertise due to lack of familiarity with and trust, lack of visionary leadership and real commitment that facilitate creating collaborative culture. Behavioral challenges were considered more critical than that of material resources for building successful collaboration.

# **Future Prospects and Strategies**

The faculty members were optimistic regarding the prospects of LIS research collaboration. They all (n = 17) firmly believed that future of LIS profession, education and research could only be captured through developing research liaison and collaboration.

Formal research consortia as well as informal groups and network were all considered as key ways to move LIS research forward. They thought that collaboration should be fostered among LIS departments, faculty and professionals by offering joint research academic

programs and research ventures. Faculty exchange programs, visiting faculty and collaborative professional activities such as conferences, workshops, seminars, symposiums and guest lectures were considered crucial to foster research culture. They emphasized on developing physical or virtual platform to coordinate, share and discuss research ideas, developments, issues and challenges. They thought research collaboration had become easy and speed because of Virtual environment such as list serves discussion groups, Facebook and other social media sites to facilitate the discussion and sharing of research publications and ongoing research projects.

"We should have research portals for sharing ongoing research projects of MPhil, PhD or any other level" (N7).

#### Conclusion

Collaboration is a flourishing global trend. However, collaboration among LIS researchers in Pakistan is weak and largely informal. Lack of resources and behavioral issues were the major hindrances. High level awareness about the benefits of collaboration among LIS faculty members is a positive indicator. Formal, well planned long-term activities may include joint academic research programs, research projects, and faculty and students exchange programs to develop research collaboration culture. Scope of such activities may be extended to groom the regional and international research collaborative activities.

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# SERVING THE LIBRARY USER COMMUNITY THROUGH FACEBOOK DURING COVID-19 PANDEMIC; WITH SPECIAL REFERENCE TO SRI LANKAN ACADEMIC LIBRARIES

#### D. P. C. Vithana\*

Senior Assistant Librarian, Uva Wellassa University, Badulla, Sri Lanka palika@uwu.ac.lk

# Pearl K. Wijesekara

Senior Assistant Librarian, General Sir John Kotelawala Defence University, Sri Lanka libsouthern@kdu.ac.lk

# K. M. R. K. Kulatunga

Senior Assistant Librarian<sup>,</sup> Uva Wellassa University, Badulla, Sri Lanka kumari.kulatunga@gmail.com

#### **Abstract**

The current situation with the Covid-19 pandemic limits the libraries from reaching their users traditionally. It leads to a trend in many sectors to search for other alternatives where libraries can reach out to their users safely. Facebook is such a social media platform that has many benefits to offer for free services. It is also helpful to reach a wider user community. No pre-established social media guideline or system for libraries in Sri Lanka is a problem associated with the usage of Facebook. The Exploration of the possibilities, limitations, and constraints of currently available library Facebook profiles will provide a proper understanding and vision for future developments. The research objective was to explore the practices of using the Facebook online platform by university libraries in Sri Lanka to continue connections with their user community during the COVID pandemic. Libraries in Sri Lanka use Facebook pages to promote their services and to share beneficial information. About 88% have more than one profile for their main libraries. Some of them maintain separate Facebook profiles for different Faculty and institutional libraries. The study suggests a policy for the safe and appropriate use of social media, inclusive of Facebook. Moreover, the study suggests promoting the library's Facebook profiles among users and encouraging the establishment and maintenance of Facebook accounts by librarians.

**Keywords:** Facebook, University Libraries, Social Media, COVID 19 pandemic

\*Corresponding author Abstract No. ICULA2021 V1

#### Introduction

The Covid-19 pandemic has been a global challenge. Many countries have been imposing strict regulations to diminish the spread of the virus from time to time, such as suggesting, conducting activities from home, and implementing physical or social distancing policies. Consequently, academic libraries, especially their services and user connections, have undergone diminishing demand. In this context, Facebook is one of the most potential platforms to continue the interrelation with their user community, sharing all possible information to fulfill user's demands (Nicola et al., 2020).

Web 2.0 is directed towards the increased use of Internet services (Harrison et al., 2017). Hence, academic libraries have started to increase social media engagement with users and assist them in creating a community of users with increased engagement with various groups of outside community and enable the user to be more accessible on resources and services which are user friendly (Chatten, Z. and Roughley, S., 2016). It has been effectively supporting different applications or tools that have been introduced from modern social media online platforms to users for networking with each other, video and photo sharing and post, tag, dig, blogs, etc. Therefore, libraries integrate social media into their marketing strategies (Siddike et al., 2015).

In their studies, Siddike et al. (2015) and Chizwina et al. (2017) recommended Facebook as the most effective way of marketing their library services on social media online platforms. Another study done by Chizwina et al. (2017) proposes a social media policy for safe and appropriate use of social media and developing user awareness associated with protocols to engage with social communication. (Al-Daihani and AlAwadhi, 2015).

It is observed that the use of Facebook page for serving the library user community and continuing the library services by the academic libraries during the pandemic in Sri Lanka is not investigated in depth. This research aims to fill that gap in the research literature.

## **Scope and Limitation of the Study**

The scope of the present study is limited to examine the use of social media by the Academic Libraries of Sri Lanka for providing library services during lockdown due to COVID-19. The scope is further limited to below Universities of Sri Lanka and their institutional Libraries.

# **Significance of the Study**

This study is significant as the findings would help libraries in the formulation of proper Social Media Policies and effective strategies for using Facebook for delivering library services more effectively during pandemics in the future.

# **Objectives**

The main objective of this study was to explore the methods of using Facebook online platforms by university libraries in Sri Lanka to continue the connections with their user community during the COVID 19 pandemic.

Exploring the official Facebook use of academic libraries in Sri Lanka, the user interactions and user interest towards these accounts, the types of information shared by these accounts, and the other interactive resources used to share this information were the specific objectives.

# Methodology

The current study explored the use of Facebook online platforms by university libraries in Sri Lanka to continue the connections with their user community to share the updated information of library services. The study population consisted of all the academic libraries governed under the University Grant Commission (UGC), Sri Lanka. Official Facebook accounts of these libraries were examined to investigate the types of services they promote through Facebook. Facebook accounts were surveyed using Keyword combinations; *Library*, *University*, *Sri Lanka*, and specific University names, and content analysis technique was carried out to analyzed gathered data.

#### **Results and Discussion**

As per the findings, 88% of the Academic Main Libraries in Sri Lanka use Facebook pages to promote their libraries and services and share information. All the libraries share links to freely available digital resources through these pages. Moreover, they share information regarding webinars and training programs useful for their user community. Almost all the pages provided Messenger access to its followers to contact the page administrators. All the pages provide contact details and access details of Universities, such as web page links. As security measures, the user community is not allowed to comment openly on posts and post anything. These steps are taken to regulate what is posted on these pages. Observing post reshares, it was noticed that users reshare the content available in these sites on their profiles. According to this study, two-thirds of the selected library profiles have more than 1000 likes and followers. The study also reveals that non-users of the library reach the profiles and share information through Facebook among the Sri Lankan community. Moreover, information resources are also shared among the Facebook profiles of libraries and information centers. The libraries further expanded their services by utilizing Facebook tools and creating specific groups and online events for their services. According to this study, two-thirds of the selected library profiles have more than 1000 likes and followers. The study also reveals that non-users of the library reach the profiles and share information through Facebook among the Sri Lankan community. In addition, information resources are also

shared among the Facebook profiles of libraries and information centers. The libraries further expanded their services by utilizing Facebook tools and creating specific groups and online events for their services.

#### Conclusion

Social networks allow students to connect with students on Facebook. Since it is a widely used platform where the user community is already virtually available, it provides the libraries free and easy ways of connection. Sri Lanka's Academic Library Facebook profiles are reaching its target users to promote services and disseminate knowledge. Library Users and interested other Facebook users can also get instant information relating to the research with social media.

# **Suggestions and Recommendations**

Facebook can be recognized as a promising ground to promote and expand library services. Library professionals can adopt new strategies for sharing information. Facebook will help to inculcate the habit of using these sites for academic work. Student communities will have access to much-needed and accurate information through Facebook through the involvement of library professionals. The University Libraries should formulate suitable policies for implementing and operating social media-based services. It is also important to inculcate a positive attitude among the library professionals and the users towards the potential positive use of Facebook. Hence optimum use of social media for academic and social development and share accurate, timely information. It is also necessary to educate and spread awareness regarding the risks involved with social media.

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