

Perception of Research Support Service in Academic Libraries: A Case Study of Select Indian Research Libraries

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Abstract

Purpose: Libraries have always played a key role in collecting, managing, curating, and disseminating scholarly information. The same applies when it comes to the support of the researchers in providing various Research Support Services (RSS) in a timely manner.

The purpose of this study is to get an overview of the Research Support Service presently provided in Academic Libraries, its importance, its types, and checking for other possible services adoption that might help the researchers more effectively in pursuing their research. This study also tried to highlight the probable range of challenges that hinder the implementation of RSS.

Design/methodology/approach: Content analysis of available literature together with website analysis of the top ten research institutions in the NIRF 2023 were scrutinized to see the types of RSS offered, come up with an understanding of the popular RSS provided by these academic libraries and probable areas where more focus may be given for betterment of RSS in future.

Findings: The study reveals that a number of RSS have already been offered by these academic Institutes. Keeping the user base in mind these libraries are also offering many specialized services. However, most of them are yet to start introducing research data management (RDM) services that might address the future needs of the researchers and can take them to the next step towards RSS.

Originality/value: As per the availability of literature on RSS and examining the official websites of top ten research institutions as per NIRF 2023, data was presented. No previous study was carried out taking samples from these institutions. The study recommends that the libraries should consider introducing RDM services in these libraries together with the professional growth of their personnel, and the development of their infrastructure that will enable them to be prepared for the future demand of the researchers.

Keywords: Research Support Service; Research Data Service; Academic Libraries; Data Management Plan; Research data management



1. Introduction

Academic libraries are going through tremendous pressure to transform their services to meet the present demand of the users. In any academic library, circulation, providing access to digital content, and offering learning (including group study) space continue to be core services. But at the same time advancement of science and technology, the invention of new tools and techniques, the introduction of Open-access publication policies, more and more data-driven research, changes in publishing activities, etc. are increasingly demanding additional services from the libraries. Thus, to remain relevant and to fulfill the needs of the users in a timely manner, libraries also need to change. Now the question comes as to how fast libraries could change keeping the existing services parallelly running, where sufficient and skilled manpower is rare together with the decreasing budget scenario for almost all the libraries.

We librarians in an academic library are always concern if libraries are adapting quickly enough to meet the evolving needs of our users and if we are providing the services they require. To answer this, we need to examine how libraries are responding to current demands, the services they currently offer, the additional services they need to introduce, and the challenges they are facing during this transformative phase.

As research findings provide the foundation for human progress, it is crucial to provide timely and effective support to the researchers to help them carry out their research in a smooth manner. As the digital divide continues to close, an increasing number of academics and researchers are able to generate and gather vast volumes of data and can access openly available resources. On the contrary, the authenticity of data/resources is a big question. Librarians being a trend trained professional can help bridging this gap and thus with the changing scenario they can play a big role in providing research support to the users, able to advise users in choosing the resources provided they train themselves enough and can handle the swap easily.

2. Concept of Research Support Service

According to Forsman et al. Research data service can be seen as “specific information services provided by a particular library to promote research by meeting the unique information needs of the researchers within a particular institution”.

Research support services available in academic libraries may be explained as handholding services that assist researchers in carrying out their intellectual discovery during the research process. Research support may include providing access to intellectual content (online and offline), scholarly communications, institutional repository, information, and reference services, bibliometrics/altmetrics, geographic information systems, patents, and systematic reviews, research data management (RDM), helping researchers manage data-intensive operations in research, e.g. data management plans, research software support or data curation and preservation services, etc. research tools and techniques, reference management, similarity checking, research impact measurement, research profile management, and infrastructure facilities.

Other aspects may be providing training and offering research support services in collaboration with other relevant organizations. Moreover, libraries can provide advice and services related to research grants, ethics and integrity, research performance, and publications and outputs for supporting research in various fields.

3. Importance of Research Support Services

Timely research support services can significantly contribute to the success and progress of scholarly and scientific research. Such services enable researchers access to the resources, facilities, tools, and knowledge they desire in carrying out their research, to obtain funding from different sources, and share their discoveries to the world.

Libraries play an important role in supporting research by providing resources, and access to scholarly knowledge that considerably enhances the speed of the research process, and improves the quality of research. Here's a basic overview of their importance:

3.1 Ethical Access and Use of Information

Libraries provide access to a broad assortment of books, journals, databases, other authenticated scholarly output, and different types of digital resources such as audio, video, etc. required for complete literature evaluations. Archives and specialized databases help gaining essential additional knowledge to researchers that help in conducting in-depth studies in specific subjects. Researchers become confident through getting acquainted about the copyright issues and learn about the FAIR use principles.

3.2 Research Aid

Librarians offer skilled aid in identifying and exploiting resources, saving researchers time and improving the quality of their work. Librarians can help at any step of the research process, from examining research topics to locating and assessing sources to preparing citations, checking similarity, providing curated content, and so on.

3.3 Resource Management

Libraries can help get access to other resources that are not available locally, through interlibrary loan services; can provide referral service where reference service doesn't work out; help to get University/Institute's scholarly output, such as theses, dissertations, and research papers, through institutional repositories. Additionally, one can establish connections with other professionals in the same field, which can facilitate collaboration. For example through IRINS, SheRNI, Vidwan one can become part of a professional network that helps to collaborate with others.

3.4 Information Literacy

To improve researchers' abilities, libraries host training in different areas starting with citation/ reference management (e.g. Zotero, Mendeley, etc.), research methodology, efficient database use etc. Digital literacy

plans play an important role. Also introducing Maker's space concept can help researchers in many ways as this helps them to carry out different hands-on experiments.

3.5 Technology and Implementation

Libraries may provide access and training to different research software, specialized tools for data analysis, reference management, and content organization, while digital services support digital scholarship, including data curation, publishing, and data management. using softwares like iThenticate, Drillbit (Plagiarism Management software), different data visualizing and analyzing tools such as SPSS, VosViewer and many more which help managing many research tasks at ease.

3.6 Expert advice & Guidance

On many occasions, librarians play an important role for the researchers in resolving a number of queries and can also get help in many aspects such as preparing bibliographical references, checking similarity, knowing about different useful tools, effective searching, preparing project proposal, data management plans, to identify funding agencies and even for collaborating with others with the help of different networks. Librarians are very often called as problem solvers and guides to resources to the researchers as they always try their best to support the researcher with the required and most desired information. Concepts like "Ask a Librarian", "How do I", "Faculty Librarian", and "Research Support Librarians" are very familiar terms to the students and researchers.

3.7 Research Data Management

Library professionals are already into the collection, management, preservation, and dissemination of scholarly communications. In the lifespan of the research, a huge amount of data gets generated (primarily in case of the scientific research and others of a similar kind) which needs proper organization, storage, and management systematically for future use. Apart from this, researchers need the help in preparing the data management plan for which there is a huge demand for research data services.

3.8 Networking and Collaboration

Leading research institutions can foster research support through networking and cooperation, which gives access to cutting-edge facilities, tools, and financing. It promotes worldwide outreach, professional growth, multidisciplinary research, and information sharing. By promoting creativity and thorough problem-solving, these components improve the caliber, reach, and significance of research initiatives.

3.9 Training and Workshops

Training and workshops are essential in supporting research. These workshops cover various aspects such as research methodologies, data analysis, information literacy, academic writing, citation and referencing, technology use, research ethics, publishing and dissemination, resource awareness, grant writing and funding, library services utilization, and interdisciplinary research. Overall, these training and workshops

are crucial in enhancing research skills, improving resource utilization, and fostering a productive research environment, empowering users to conduct high-quality research and contribute significantly to academic and scientific advancement.

3.10 Publication Support

Libraries can help users to understand and apply different techniques in their research, improve their search efficiency, and develop citation styles and tools, publishing strategy, increased citation through Open Access publication, comparison of free, and open source reference managers, finding government statistics, finding full text easily, refworks, and citing analysis and journal metrics.

4. Literature Review

The current situation regarding the involvement of academic libraries in research data services was examined by reviewing multiple papers. These papers indicate that there is a strong advocacy for the relevance of research support services in academic libraries. These services have broadened the traditional roles of libraries to meet the requirements of researchers at all stages of the research process.

In their investigation into the research support services provided by the top fifty science and technology libraries in the QS 2022 ranking, (Verma & Charu, 2023) found that the most common categories of RSS were training and workshops, scholarly publishing/communication, research tools recommendation, research guides, research consultation, and open access initiatives. The research support services in Africa included basically the provision of free internet connection, institutional repositories, information resources, originality checks, and training courses that enhanced the research and information retrieval capacities of the users as pointed out by (Osadebe & Okwor, 2021). (Si et al., 2019) found that 96.2% of libraries offer research support services, including data management, open access, scholarly publishing, impact measurement, research guides, consultation, and tool recommendations. According to (Visintini et al., 2018), among all the scoping analyses of RSS literature, it was ascertained that the most frequently mentioned service was developing a research support role while the other services include funding support, systematic review and trending, data management, research metrics, and institutional repository services. A survey was conducted by (Singh et al., 2021) to evaluate the current state of RDM service in 186 academic libraries in India (including 54 Central Universities and 132 Institute of National Importance). The report shows that due to a lack of research data management policy, technological obstacles, and institutional support, academic libraries in India are still lagging behind those in developed countries in embracing RDM services. Tenopir et al. in their study in 2011 & 2015 found that even though the researchers are aware about the importance of sharing their data for future reuse, they often restrict themselves because of the time and funding barriers before they complete their planned publications. They also highlighted that other issues vary subject discipline wise together with the age, and geographic location (Tenopir et al., 2011). Researchers are faced with the issue of proper infrastructure which becomes an issue while they plan to share their research to the public.

5. Objective of the Study

- ❖ To examine the research support services provided by the top ten research libraries India as per the NIRF listing, 2023.
- ❖ To identify the research databases that are being subscribed for research support services.
- ❖ To gain insights into the services offered by them.
- ❖ To understand the gap and identify other potential research support services that may be incorporated in the future.

6. Methodology

The top ten institutions in the research category as per the NIRF ranking 2023 were chosen to study how these prestigious institutions have adopted research support services in their institutions. These institutions are noted for their excellent research facilities, faculty, and contributions to scientific and technological advancements in India and globally. The WebPages of individual institutional libraries have been visited to examine the list of research support services provided by these libraries. Institutes chosen for the study are:

- ❖ IISc Bangalore
- ❖ IIT Madras
- ❖ IIT Delhi
- ❖ IIT Bombay
- ❖ IIT Kharagpur
- ❖ IIT Kanpur
- ❖ IIT Roorkee
- ❖ AIIMS Delhi
- ❖ IIT Guwahati
- ❖ TIFR

6.1 Limitations of the Study

The analysis is restricted to the websites of the top ten Indian research institutional libraries as ranked in NIRF 2023. Data provided in the library websites were taken into account for this study. Also, these libraries' websites may not list all of their services and resources. AIIMS Delhi's research page is currently undergoing maintenance during the data collection phase, so no relevant data could be collected from the website.

7. Data Collection & Findings

The dedicated library web pages, which generally provide the details of resources and services, were evaluated to understand the library provisions for supporting research in the top ten research institutions according to 2023 NIRF ranking. While checking the research support service offered by these institutions under study, the following pictures were unleashed.

7.1 Bibliographic Database Services: The term “bibliographic database” refers to an organized digital collection of references to published literature, such as books, journals, conference proceedings, newspapers, reports, government and legal documents, patents, and other published works. These databases encompass a wide range of subject disciplines, facilitating researchers’ access to relevant content in a convenient manner. Some of these databases are Web of Science, Scopus, and MathSciNet which are popular bibliographic databases. Examining the web pages of these ten institutions reveals that all of these institutes are procuring all of these databases. Apart from these three databases, they are also procuring other databases such as law databases, financial Databases and subject databases etc.

7.2 Research Tool Services: The websites of these institutes were checked for the availability of the research support tools such as Grammarly, Quillbot (writing assistance tool), Mendeley, Zotero, and EndNote (Reference and Citation Management tool), and Similarity check software such as Turnitin, iThenticate or DrillBit, etc. The results found are tabulated below:

Table 1: Research Tool Services in the Selected Libraries

Name	Grammarly	QuillBot	Mendeley	EndNote	Zotero	Turnitin/ iThenticate	DrillBit
IISC Bangalore			Yes	Yes		Yes	
IIT Madras	Yes		Yes			Yes	
IIT Delhi	Yes	Yes		Yes			Yes
IIT Bombay	Yes					Yes	Yes
IIT Kharagpur	Yes	Yes				Yes	
IIT Kanpur	Yes	Yes	Yes		Yes	Yes	
IIT Roorkee	Yes		Yes	Yes	Yes	Yes	
AIIMS Delhi							
IIT Guwahati						Yes	Yes
TIFR			Yes	Yes	Yes		

Result shows that almost all of these libraries provide both plagiarism-checking tools and reference management tools except IIT Bombay and IIT Kharagpur, IIT Guwahati and TIFR. IIT Bombay, IIT Kharagpur, and IIT Guwahati’s website don’t show any reference management tools, however, they all have plagiarism-checking tools whereas TIFR doesn’t show the availability of any plagiarism software.

Additionally, IIT Kharagpur offers some services that are helpful for the students for research purposes such as an online collaborative LaTeX editor called Overleaf that is used to draft, revise, and publish scientific papers. It collaborates with numerous scientific publishers to offer direct submission links and official LaTeX templates for journals. O'Reilly Media is a renowned American media company that offers extensive resources for professional development, including training in areas such as artificial intelligence, data science, programming, and more. IIT Kharagpur and IIT Bombay offer Bloomberg platform, which is a global leader in business and financial information, delivering trusted data, news, and insights that bring transparency, efficiency, and fairness to markets.

IIT Delhi offers ChemDraw Professional, a powerful software tool used by researchers in chemistry, biochemistry, and related fields to aid in creating, analyzing, and sharing chemical structures and reactions. Apart from the general citation management tools, IIT Kanpur also offers two additional tools called Pybliographer and Bibdesk. Pybliographer is highly customizable and automation-friendly, making it a powerful tool for managing bibliographic data. On the other hand, Bibdesk is user-friendly for LaTeX documents and can enhance research productivity.

Apart from these, due to significant partnerships with foreign universities, research centers, and business partners, these institutions have access to cutting-edge financing and resources for their studies. In addition, they organize a lot of conferences, seminars, and workshops that promote networking between academics, industry professionals, and researchers. All these libraries offer a year-round training program to enhance research productivity and use its information sources. Libraries now include outreach services as a crucial part of their offerings teaching researchers and other users on how to get the most from the materials they can access through subscribed content, open access resources or even through services like document delivery service or other collaborations. The libraries are also in charge of organizing Author/Publishing Workshops that assist users with the utilization of academic writing that helps in supporting the research process.

8. How research support services can be improved

8.1 Assess the needs and gaps: The first step to increase awareness about research support services is to assess the needs and gaps of the academic community. Libraries can conduct surveys, interviews, focus groups, or observations to identify the current level of awareness about the RSS, the challenges and opportunities, and the preferences and expectations of the users. This will help libraries tailor their research support services programs and services to the specific needs and goals of the academic and research community.

8.2 Provide access and support: The second step is to provide access and support to scholarly communications as well as the required infrastructure. Libraries should offer speedy internet access, computers, tablets, e-readers, and other digital tools apart from the quality content for the users. Libraries can also provide technical support, troubleshooting, and guidance on how to use these devices and access

online information. Libraries can create a welcoming and inclusive environment where users feel comfortable and confident to explore and learn.

8.3 Offer training and education: The third step would be offering training and education on various research tools, software, and other related skills and topics. Libraries can design and deliver workshops, courses, webinars, or tutorials on how to use these tools (for example how to use reference management software, other analytical tools, etc.). Libraries can also instruct users in digital information creation, evaluation, sharing, searching, filtering, and knowing about copyright and so on.

8.4 Collaborate and network: The fourth step might be the support in collaboration and networking with other stakeholders and partners. Libraries can work with other academic libraries, institutions, research institutions, funding agencies, or government agencies to share resources, expertise, and best practices that might help researchers in resolving several issues, and exchange ideas, experiences, and feedback on their work. Libraries can leverage these collaborations and networks to strengthen their offerings and outreach.

8.5 Promote and advocate: The fifth step might be increasing awareness, raising visibility through promotion, and advocating for the importance and benefits of these services through various channels, such as websites, newsletters, social media, flyers, posters, or word-of-mouth. Libraries can also showcase the success stories and testimonials of the users who have benefitted from their services. Libraries can also advocate for more funding, support, and recognition for their researchers from the decision-makers and policymakers.

8.6 Evaluate and improve: The sixth step to increase awareness about their RSS and simultaneously evaluate and improve the effectiveness and impact of the same. Libraries can collect and analyze data, such as who are availing these services, satisfaction, feedback, etc. Libraries can also use tools, such as surveys, quizzes, interviews, or focus groups to measure the effectiveness of such services and the needs of the users for any other services. Libraries can utilize these data and tools to evaluate their research support services and programs and to make necessary improvements. Finally, libraries can also help to recognize the great initiatives undertaken by other institutions and organizations.

9. Conclusion

Overall, it appears that all these academic libraries provide research support services by offering scholarly resources together with access to different research support tools such as reference management, plagiarism checking, data analyzing/ visualization tools, or even research writing tools etc. The transition from print to electronic journals, databases, and e-books has significantly changed the importance of collections as a measure of research support. The study concludes that libraries were found to espouse information provision as a means to support research across all libraries. However, these libraries are yet to introduce RDM to support securing data of the researchers, encourage data sharing practices that might help duplicate the task or data services, specialized advice services such as support in search of the funding institutes, publication support, help in writing data management plans, etc. which is the future demand of the researchers.

This study is conducted with a small set of data and a more detailed search might give a more detailed picture. Also, as these libraries are in the top ten listings in the NIRF research category, it might be assumed that they are providing many services which other libraries can adopt to remain relevant in the present scenario.

With the continuous budget cuts for libraries, it is becoming difficult to provide more specialized services. However, to support research, libraries need to go the extra mile to equip themselves with skilled manpower (both recruiting new skilled staff and educating existing manpower), develop proper infrastructure to provide the needed service, and collaborate more to present a trusted place for the researchers.

References

1. Forsman, M., Ndinoshiho, J., & Poteri, E. (2012). Research Support Services of University Libraries: Today and in the Future. In M. Iivonen, P. Helminen, J. M. Ndinoshiho, & O. Sisättö (Eds.), *Empowering People* (pp. 180–200). Tampereen yliopistopaino.
2. Osadebe, N.E. & Okwor, R. N. (2021). Research Support Services in Selected African University Libraries. *Library Philosophy and Practice*, 2021, 1–13.
3. Padhan, D. K., & Naidu, G. H. (2022). Research support services in academic libraries. In 13th International CALIBER-2022: Envisioning Digital Transformation in Libraries for Nextgen Academic Landscape, 17-19 November 2022, BHU, Varanasi. 197-207. <http://ir.inflibnet.ac.in/handle/1944/2374>
4. Si, L., Zeng, Y., Guo, S., & Zhuang, X. (2019). Investigation and analysis of research support services in academic libraries. *Electronic Library*, 37(2), 281–301. <https://doi.org/10.1108/EL-06-2018-0125>
5. Singh, K., & Siwach, A. K. (2024). Researchers' Expectations Towards Library Research Support Services (LRSS): A Case Study of Maharshi Dayanand University, Rohtak. *DESIDOC Journal of Library and Information Technology*, 44(2), 69–76. <https://doi.org/10.14429/djlit.44.2.18976>
6. Singh, R. K., Raj, R., & Madalli, D. P. (2024). Investigation of research support services (RSS) in academic libraries of India. *Journal of Librarianship and Information Science*. <https://doi.org/10.1177/09610006241245714>
7. Tenopir, C., Kaufman, J., Sandusky, R., & Pollock, D. (2019). Research Data Services in Academic Libraries/ : Where are We Today/ ? *Choice White Papers*, 54. <http://choice360.org/librarianship/whitepaper>
8. Verma, V. K. & Charu (2023). Research Support Services/ : An Analysis of top Science and Technology Institutions. *Library Philosophy and Practice (e-journal)*. 7602. <https://digitalcommons.unl.edu/libphilprac/7602>

9. Visintini, S., Boutet, M., Manley, A., & Helwig, M. (2018). Research support in health sciences libraries: A scoping review. *Journal of the Canadian Health Libraries Association*, 39(2), 56–78. <https://doi.org/10.29173/jchla29366>

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