AWARENESS AND USE OF RESEARCH SUPPORT SERVICES BY RESEARCHERS: A STUDY OF IIT ROPAR (PUNJAB)

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ABSTRACT

In the emerging information society, creation of information is an important aspect and research helps in creating information. Libraries and librarians are assuming crucial role in supporting research through diverse means. To align with the changing research paradigm, libraries of all types across the globe are undertaking measures to modernize their operations and embrace a wider range of research support initiatives. Research support encompasses a variety of services, resources, and assistance that are offered to researchers with the aim of facilitating their work and improving the quality, efficiency, and impact of their research endeavors. The Indian Institutes of Technology (IITs) being the advanced institutes of the country and engaged in quality education and research can provide better preview of these services. The present study aims to examine the research support services offered and their awareness and use among researchers of Indian Institute of Technology (IIT), Ropar which is one of the leading IITs on north India. The study found that majority of the users visit the library to find research material and to use its space for study. While users are using and expressing satisfaction with majority of research support services being offered, the library should focus on strengthening less used services. The study concludes with suggestions to improve the use of resources and services and provide valuable insights for the authorities to enhance their ability to meet the changing and diverse needs of their users more effectively.

KEYWORDS: Research Support Services, Emerging Library Services, Iit Library, Punjab

INTRODUCTION

Over time, libraries have witnessed significant shifts in user expectations due to evolving societal demands, changing learning needs, and advancements in technology. Present-day library users expect uninterrupted access to digital resources. They want streamlined and user-centric systems that enable remote access to these resources at anytime from anywhere. There is a growing expectation among users for libraries to play a proactive role in developing information literacy skills. They look for guidance and assistance in navigating the vast ocean of information, critically assessing sources, and designing effective research methodologies. Libraries are now anticipated to organize workshops, training sessions, and personalized consultations to empower users with the essential competencies needed to proficiently locate, evaluate, and use information resources.

Even in recent years, there has been a change in focus within higher educational institutions towards research output. The significance of research output for institutions lies in its contribution towards achieving higher global rankings. Consequently, this has placed increased pressure on researchers, as their individual success directly impacts both their own career prospects and the reputation of the institution they are affiliated with. With the shifting

focus, ever changing expectations of users and the emergence of digital technologies, libraries have undergone a significant transformation, evolving from traditional book repositories into dynamic and inclusive environments that promote learning, collaboration, and innovation. Libraries are playing a crucial role in providing support for research and academic endeavors. By embracing digital resources, advocating for information literacy, functioning as community hubs, and promoting open access, libraries persistently adapt and evolve in their mission to connect individuals with knowledge and empowering communities in the digital era.

RESEARCH SUPPORT SERVICES (RSS)

Research support encompasses a variety of services, resources, and assistance that are offered to researchers with the aim of facilitating their work and improving the quality, efficiency, and impact of their research endeavors. As also stated by Hoffman (2016), research support refers to the collective efforts undertaken by libraries to advance and cultivate scholarly and research-related initiatives within their respective institutions.

In contemporary times, libraries and librarians are assuming a crucial role in supporting research through diverse means. In addition to their conventional resources and services, libraries are now venturing into emerging services and incorporating them into their offerings. To align with the changing research paradigm, libraries of all types across the globe are undertaking measures to modernize their operations and embrace a wider range of research support initiatives. This response is driven by the rapid advancement of empowering technologies and evolving instructional approaches, which have generated interest in novel research support services such as bibliometrics, data management, digital preservation and curation, open access, and more. Libraries are making concerted efforts to deliver these services to their users.

REVIEW OF LITERATURE

Over time, teaching, learning, and research practices undergo a paradigm shift. As a result, libraries are required to respond to these transformations and cater to the needs of their users. Librarians are actively taking steps and creating novel services to facilitate research within their institutions (Finalayson & Mitha, 2014; Awan et al., 2022; Santharooban, 2022). Numerous researchers have examined the research support services provided by libraries to evaluate the extent of their effective utilization by users.

The studies indicated that researchers showed a preference for assistance in activities such as funding, grant proposals, research data management, and support for publications (Peters & Dryden, 2011). Delaney and Bates (2018) in their findings also revealed the same. According to the results of their study, the respondents expressed their need for training in areas such as writing literature reviews, academic writing, and presentation skills. They indicated a preference for online training or one-on-one sessions with librarians to receive these trainings. But active involvement of users is necessary to develop effective research support programs (Daland, 2013; Vaughan et al., 2013). There is a need for increased promotion of guidance in writing technical reports and tools for managing personal content to enhance the utilization of such services (Liji & Devi, 2018). MacColl and Jubb (2011) found in their study that researchers expressed dissatisfaction with their experience and perception of library research support services.

Berman (2017) revealed through his findings that a small percentage of users (39%) were aware of and utilized known metadata standards for managing their research data. Assisting users in developing effective search strategies is a significant challenge that librarians need to

address (Bussell et al., 2020). Researchers have specific expectations from libraries regarding research support. These include the provision of relevant collections, consultation services, search strategies, support for scholarly communication, data visualization assistance, data management services, and technology lending (Nickels & Davis, 2020). Researchers have expressed their desire for libraries to offer research data management services, while also emphasizing the importance of safeguarding the privacy of sensitive and personal data (Fu et al., 2022). Additionally, researchers have stated that with the necessary support, they are capable of making their data FAIR, which benefits both them and others (Kersloot et al., 2022). Despite various challenges, a study by Ullah et al. (2022) highlighted the successful efforts of university libraries in Pakistan to serve their users during the COVID-19 pandemic. Fazal and Chakravarty (2019), based on their study's findings, proposed that librarians should actively engage in the research process and take proactive steps to promote their services.

Considering the above review, it was felt to study the research support services offered by libraries and their awareness and use among researchers. The Indian Institutes of Technology (IITs) being the advanced institutes of the country can provide better preview of these services and the present study is based on Indian Institute of Technology (IIT), Ropar which is one of the leading IITs on north India.

INDIAN INSTITUTE OF TECHNOLOGY (IIT), ROPAR

IIT Ropar holds a prestigious position among India's top technical institutions. It was founded in 2008 as one of the eight new Indian Institutes of Technology (IITs) established by the Ministry of Human Resource Development, Government of India. The primary objective of these institutions is to broaden the accessibility and improve the standard of technical education across the nation. IIT Ropar offers a range of undergraduate, postgraduate, and doctoral programs in various disciplines of engineering, science, and technology. It houses several research centers and laboratories that focus on specialized areas of research. These centers offer cutting-edge facilities, advanced equipment, and abundant resources to foster research activities. A significant accomplishment for the institute in the year 2021-2022 was the release of the National Institutional Ranking Framework (NIRF) by the Ministry of Human Resource Development (MHRD). In this ranking, IIT Ropar secured the 19th position in the Engineering category among the top engineering institutions and additionally, it achieved the 31st rank overall among all the universities and institutions participating in the country.

CENTRAL LIBRARY, IIT ROPAR

The library of IIT Ropar is a vital academic resource that supports the teaching, learning, and research activities of the institute. It houses an extensive collection of print and electronic resources, including textbooks, recommended reading material, research monographs, reports, theses/ dissertations, reference sources like dictionaries, encyclopedias, and handbooks, etc. Through its involvement in consortium like E-ShodhSindhu, the library facilitates access to e-journals and subscribes to various other e-journals directly from publishers and reputable subscription agencies. Currently, users have access to over 22,700 books physically available in the library, as well as a vast collection of e-books and e-journals. Additionally, the library provides online access to economic and political science databases, along with scientometric databases such as Web of Science, Scopus, and MathSciNet.

The library is equipped with state-of-the-art infrastructure and technology to enhance digital access and services. It comprises computer workstations with internet connectivity, specialized terminals dedicated to accessing online resources, and software tools designed to

support research and academic endeavors. The library provides a comfortable environment for studying and research. It offers valuable reference and research assistance to aid users in locating pertinent information and making optimal use of library resources. The trained library staff members offer guidance, support literature searches, and address research queries. Users have the option to seek assistance in person, via chat or through email.

OBJECTIVES OF THE STUDY

1. To know about the awareness and use of RSS by researchers of IIT Ropar.

2. To examine the satisfaction level of researchers about RSS provided by the Central Library of IIT Ropar.

3. To identify the problems faced by researchers in accessing and using RSS.

RESEARCH METHOD

The current study is descriptive in nature and is confined to IIT Ropar. The aim was to study the awareness and use of RSS by researchers, their satisfaction level and problems experienced by them in accessing and using these services. Using the quantitative research approach, a structured questionnaire was designed to collect primary data and data was collected randomly from 50 researchers.

DATA ANALYSIS

The analysis of the data is based on the responses received from researchers at IIT Ropar and is presented as follows:

6.1 Frequency of Library Visit

Week

Researchers were asked about the frequency of their library visits. Table 1 shows that 32% researchers rarely and occasionally visit the library. Only 4 respondents out of 50 i.e. 8% visit the library very frequently.

Table 1: Library Visit by Respondents per

Ratings	Frequency	Percent
Never	6	12
Rarely	16	32
Occasionally	16	32
Frequently	8	16
Very Frequently	4	8
Total	50	100

6.2 Purpose to Visit the Library

The statements were provided related to the purposes of library visit and were rated as most important (5) to least important (1) on five-point Likert Scale. The mean and standard deviation is shown in Table 2.

Table 2: Purpose to Visit the Library

Statements	Mean	Std. Deviation
To find material on research topic	3.52	1.568
To use library as a place of study	3.52	1.502
To browse the Internet	2.56	1.527

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To consult library staff	2.74	1.411
To use printed/ e-Books	2.50	1.502
To use printed/ e-Journals	2.64	1.439
To access Digital Library	3.16	1.476
To write research articles	2.46	1.297
For preparing presentations	2.30	1.529
To keep up to date	2.58	1.444

The results illustrated in Table 2 clearly indicate that the mean is maximum for 'to find material on research topic' and 'to use library as a place of study' i.e., 3.52 followed by 'to access Digital Library' with mean value of 3.16. Mean is minimum for 'for preparing presentations' i.e., 2.30.

6.3 Familiarity with the research support term and services

The survey asked about the respondents' familiarity with the 'research support' term and services before participating in the study. Table 3 demonstrates that out of 50 respondents, only 22 (44%) confirmed their awareness of the term and services

Table 3 Familiarity with the term and services

Statement	Yes		No	
	Count	%	Count	%
Familiar with the terminology	22	44	28	56
Familiar with services	22	44	28	56

6.4 Know about RSS offered by the library

Table 4 clearly demonstrates that respondents have raised their awareness about RSS from their fellow researchers with the maximum mean value of 2.54, followed by faculty members (mean=2.52), and library orientation (mean=2.50). Minimum mean value is for conferences & workshops (mean=2.20).

Table 4: Know about RSS offered by the library

Statements	Mean	Std. Deviation
Orientation by the Library	2.50	1.344
Through Librarian/ Library Staff	2.34	1.255
During Research Course Work	2.42	1.230
Conferences & Workshops	2.20	1.195
From Fellow Researchers	2.54	1.182
From Faculty Members	2.52	1.297
Library Blog/Website	2.22	1.314

6.5 Frequency of using RSS offered by the Library

Within the realm of RSS, the services were classified into two sub headings i.e. traditional services and new/emerging services.

6.5.1 Traditional Services

Table 5 depicts that 'open access and access to e-resources' were the most frequently used services, with mean values of 3.42 and 3.26 respectively. These were followed by the 'help desk' and 'ask-a-librarian services', which had a mean value of 2.86 each. The Inter Library Loan service had the lowest use among the traditional services, as indicated by a mean value of 1.74.

Table 5: Traditional Services

Services	Mean	Std. Deviation
Information Map about 'What is Where'	2.32	1.220
Help Desk	2.86	1.370
Open Access	3.42	1.326
Current Awareness Services	2.30	1.344
Table of Content Services	2.14	1.246
Selective Dissemination of Information	2.12	1.239
Newspaper Clipping Services	2.12	1.272
Indexing and Abstracting Services	2.62	1.550
Document Delivery Services	2.02	1.332
Inter Library Loan Services	1.74	1.065
OPAC/Web-OPAC	2.36	1.367
Access to e-Resources	3.26	1.496
Ask-a-Librarian	2.86	1.525
Information Literacy Programs	2.14	1.229
Institutional Repository	2.50	1.344

6.5.2 New/ Emerging Services

Table 6: New/Emerging Services

Services	Mean	Std. Deviation
Remote Access to Resources and Services	3.26	1.454
Literature Search Assistance	2.68	1.347
Bibliometric Services (e.g. h-Index/ Research Impact Calculations, Citation Analysis etc.)	2.84	1.346
Research Data/ Reference Management Services (Mendeley, EndNote, etc.)	3.00	1.262
Open Access/ Scholarly Publishing Literacy (guiding in choosing where to publish or alternative forms of dissemination)	3.18	1.289
Research Tools Recommendations	2.96	1.277
Training to use Plagiarism Check Software	3.30	1.374
Guidance on Research Ethics	3.08	1.259
Guidance regarding Copyright and Licensing	3.06	1.300
Training in improving Information Retrieval and Management Skills	2.66	1.154
Dedicated Research Spaces	2.82	1.366
Training to build scholarly networking (e.g. Academia.edu, ResearchGate, Mendeley, LinkedIn, etc.)	2.74	1.337
Research Partners/ Consultation	2.36	1.290
Research Profiles	2.70	1.403
Research Visibility	2.68	1.463
Awareness drive regarding Research Funding Opportunities	2.52	1.432

The results demonstrated in the Table 6 shows that the service 'training to use plagiarism check software' was the most frequently used as indicated by the highest mean value of 3.30. Following closely were 'remote access to resources and services' and 'open access/ scholarly publishing literacy' with mean value of 3.26 and 3.18 respectively. The service research partners/ consultation' (mean=2.36) had the lowest use among all the services provided.

6.6 Satisfaction with the RSS offered by the Library

In order to assess the satisfaction level regarding the services provided by the library, researchers were asked to mark their responses on a five-point Likert scale. The scale ranged from 5 for "highly satisfied" to 1 for "highly dissatisfied".

6.6.1 Traditional Services

Based on the data presented in Table 7, the service with the highest mean value is open access at 3.56, closely followed by ask-a-librarian with a mean value of 3.52. Additionally, help desk and access to e-resources also received high mean values of 3.48 each. The library should prioritize enhancing its inter library loan service, as it is evident from the user responses that this service is the least used as it has the lowest mean value of 2.26.

Table 7: Satisfaction Level

Services	Mean	Std. Deviation
Information Map about 'What is Where'	2.94	1.596
Help Desk	3.48	1.515
Open Access	3.56	1.402
Current Awareness Services	2.84	1.462
Table of Content Services	2.92	1.469
Selective Dissemination of Information	2.44	1.500
Newspaper Clipping Services	2.80	1.429
Indexing and Abstracting Services	3.12	1.394
Document Delivery Services	2.42	1.655
Inter Library Loan Services	2.26	1.549
OPAC/Web-OPAC	2.84	1.719
Access to e-Resources	3.48	1.328
Ask-a-Librarian	3.52	1.488
Information Literacy Programs	2.72	1.471
Institutional Repository	3.12	1.409

6.6.2 New/Emerging Services

Table 8: Satisfaction Level

Services	Mean	Std. Deviation
Remote Access to Resources and Services	3.50	1.473
Literature Search Assistance	3.06	1.359
Bibliometric Services (e.g. h-Index/ Research Impact Calculations, Citation Analysis etc.)	3.00	1.429
Research Data/ Reference Management Services (Mendeley, EndNote, etc.)	2.90	1.433
Open Access/ Scholarly Publishing Literacy (guiding in choosing where to publish or alternative forms of dissemination)	3.38	1.178
Research Tools Recommendations	3.04	1.271
Training to use Plagiarism Check Software	3.08	1.514
Guidance on Research Ethics	2.85	1.458
Guidance regarding Copyright and Licensing	2.94	1.390
Training in improving Information Retrieval and Management Skills	2.69	1.386

Dedicated Research Spaces	2.96	1.529
Training to build scholarly networking (e.g. Academia.edu, ResearchGate, Mendeley, LinkedIn, etc.)	2.83	1.326
Research Partners/ Consultation	2.25	1.618
Research Profiles	2.69	1.587
Research Visibility	2.71	1.557
Awareness drive regarding Research Funding Opportunities	2.40	1.621

Table 8 highlights that most researchers expressed satisfaction with the services of remote access to resources and services and open access/scholarly publishing literacy as evident by their high mean values of 3.50 and 3.38, respectively. Additionally, the services of training to use plagiarism check software with a mean value of 3.08 and literature search assistance with a mean value of 3.06 also indicated user satisfaction. The service of research partners/consultation received the lowest mean value of 2.25, indicating that respondents were least satisfied with this service.

6.6 Problems faced by Researchers in using RSS

Table 9 presents the problems that hinder the use of research support services provided by the library. These factors include downloading and sharing with a highest mean value of 2.69, and partial access to resources with a mean value of 2.41. The lowest mean value of 2.06 corresponds to power failure/fluctuation, indicating the least impact of this particular problem.

Table 9: Problems faced by Researchers

Problems/Challenges	Mean	Std. Deviation
Downloading and sharing	2.69	1.122
Slow connectivity	2.29	1.061
Frequent power failure/ power fluctuation	2.06	1.029
Inadequate bandwidth	2.20	1.080
Remote access not available	2.12	1.111
Inadequate technological infrastructure	2.22	1.066
Partial access to resources	2.41	1.117
Inter library loan take too long	2.37	.972

DISCUSSION

The way libraries support research has undergone a significant change. Historically recognized as mere repositories of books, libraries have now evolved into dynamic and indispensable facilitators of information and research activities. However, it is necessary to assess whether the resources, services, and facilities provided by libraries to support research are effectively used by users or not. Researchers being an important user category involved in doing research, the objective of this study was to examine the researchers' awareness, use, and satisfaction with the research support services provided by the library, with the ultimate goal of enhancing the services to better meet their needs.

The survey clearly indicated that libraries should continue organizing orientation programs as these effectively enhance users' awareness. Additionally, it is essential to organize workshops, seminars and training sessions to educate users about the available services and how to effectively use them. These proactive measures will contribute towards maximizing the use of library resources and services, aligning with the goal of providing optimal support to researchers.

A significant number of users were found to be using and expressing satisfaction with the services of open access and access to e-resources. However, it is crucial for libraries to proactively establish relationships with researchers and offer partnerships/consultations in their research work, especially considering that this service received the lowest ratings in terms of use and satisfaction.

The respondents identified downloading and sharing, partial access to e-resources, and inter library loan taking too long as significant problems faced while using research support services. Libraries should take proactive measures to mitigate these problems and provide solutions to enhance user experience. Users explicitly indicated that libraries can promote and enhance RSS by providing guidance on writing research proposals, conducting database trainings, and maintaining research repositories.

CONCLUSION

In the emerging information society, creation of information is an important aspect and research helps in creating information. Research support services (RSS) have a crucial role in enabling high-quality research, fostering collaboration, and strengthening the research capacities of both individuals and institutions. Through the provision of diverse resources, expertise, and assistance, these services actively contribute to the progression of knowledge, innovation, and societal advancement. The findings of this study presented an outlook on the current status of RSS provided by IIT Ropar. Majority of the users visit the library to find research material and to use its space for study. Libraries ought to adopt proactive measures such as organizing orientation programs, workshops, and hands-on training sessions to improve the use of the services being offered. While users are using and expressing satisfaction with the majority of the services offered, the library should focus on strengthening less used services such as inter library loan, document delivery, research partners/consultation, and awareness campaigns. The library should give due consideration to the identified issues and actively work towards their resolution, thereby mitigating the problems acknowledged by the users. The study's findings provide valuable insights for the authorities to reassess their resources, services, and facilities, enabling them to enhance their ability to meet the changing and diverse needs of their users more effectively.

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