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Researchers' Expectations Towards Library Research Support Services (LRSS): A Case Study of Maharshi Dayanand University, Rohtak

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ABSTRACT

This cross-sectional study is aimed to identify the expectations and problems faced by faculty members and research scholars at Maharshi Dayanand University regarding library research support services (LRSS) under seven service dimensions. The research outcome reveals that the service most anticipated by the participants was 'Database Services' having the highest mean score, followed by 'Infrastructure Facilities' and 'Institutional Repositories'. The least expected service was 'Scholarly Communication Services' which had the lowest mean score. The only service with significant differences between gender and qualifications was 'Infrastructure Facilities'. In terms of challenges faced, the most noteworthy problems identified included inadequate funding for article processing charges and limited access to computers in the library. Other problems included a lack of training in research support tools and ICT skills, lack of accessibility to library services from home, poor Internet connectivity, and lack of training/ consultation to use services. The library staff was reported to be helpful and supportive. The study provides insights into the expectations and problems of users in the context of LRSS. The study also highlights the imperative need for adequate funding for APCs and improved computer facilities, alongside targeted training initiatives for optimum use of research support tools and enhancing ICT skills to improve the efficacy of LRSS.

Keywords: Research support; Library research support services (LRSS); Database services; Research data management (RDM); Academic libraries

1. INTRODUCTION

Academic libraries have been at the forefront of facilitating and promoting scholarly research activities in universities and other institutions of higher learning. The main goal of academic libraries is to assist their parent institutions in teaching, learning, and research endeavours[1]. They provide a comprehensive suite of services, resources, and tools that support researchers in their quest for knowledge and intellectual discovery. Some researchers have used the term "Research Support Service" (RSS) for these; however, a more appropriate term can be "Library Research Support Service" (LRSS). It can be viewed 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"[2].

Library research support services are those that assist researchers in their pursuit of knowledge and intellectual discovery. Research support is the "help given to researchers during the research process" These services may include reference and information services, instructional services, database services, research data management (RDM), research tools, scholarly communication, research impact measurement, institutional repository, and infrastructure facilities. These services are intended to help researchers access the information they need, use it effectively, and produce high-quality scholarly outputs.

To provide a comprehensive service under the term "Library Research Support Service (LRSS)", it is important to explore the expectations of researchers. So, the present study is selected to explore the expectations of the researchers towards LRSS along with the problems currently being faced by them. A case study of Maharshi Dayanand University, Rohtak has been selected for this purpose. The LRSS has been categorised under seven dimensions for the study and researchers' expectation towards these seven dimensions have been explored.

1.1 About Maharshi Dayanand University

Maharshi Dayanand University (MDU) is a State University situated in Rohtak, Haryana having 10 faculties, 41 Departments and a satellite campus in Gurugram. The university has been awarded a rating of A+ by National Assessment and Accreditation Council for academic and research excellence, with a CGPA of 3.44. Furthermore, it secured 94th rank among the leading 100 universities in India and first among State Universities of Haryana in the NIRF 2022 and was awarded the "Green Institutional Mentor Award" by the MHRD in 2020[4].

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The central library of the University named "Vivekananda Library" is designed to provide a highly conducive academic environment housed in a magnificent 3-story building. The library has a collection of over four lakh books, bound volumes, dissertations and theses, and regularly subscribes to Indian as well as foreign journals. The library also has an amazing digital collection of nearly 57,000 eBooks by prominent global publishers. The library subscribes to prominent national and international databases like Science Direct, Emerald, IndianJournals.com, Sage Research Methods, Scopus, WoS, ICI, CMIE, MLA International Bibliography, Manupatra, AIR Combo, etc.[4]

1.2 Research Support Services at Maharshi Dayanand University

Although the university library is not offering services under the term "Research Support Services", there are many services provided by the university library which pertains to researchers. The library provides access to e-journals, e-books and databases like Scopus and Web of Science. It also help researchers in literature search, synopsis writing, identification of journal for publication, creating profiles on Research Network Portals (e.g., ResearchGate, Mendeley, Academia.edu, ORCID) and exploring research collaborations. The library also provides bibliometric training and assistance in determining metrics like h-index and Impact Factor. Research tools like Turnitin for plagiarism detection, Grammarly for writing assistance and Refread for remote access and federated search are also available. It also maintains its own Institutional Repository. Essential infrastructure facilities such as high-speed internet, WiFi, dedicated reading rooms, and specialised computer labs are also provided.

2. LITERATURE REVIEW

The literature review was conducted using a systematic approach. Relevant articles were identified through a search of several academic databases. Articles were selected based on their relevance to the topic and the quality of their research. Some such studies have been discussed here.

2.1 Importance of Research Support Services

The importance of research support services has been highlighted in many studies. Awan, Richardson & Ahmed[5] stated that since 2000, the literature has seen a rise in studies emphasising the significance of research support services and emerging as a popular service in academic libraries across the globe "particularly in the university libraries of the UK, USA, Germany, Australia, New Zealand, and Ireland". Brown[6], *et al.* explored that the traditional roles of libraries, which included the provision of information assistance and training, have now been augmented and today libraries also provide research support to the researchers throughout the research lifecycle. Fazal & Chakravarty[7] stated that through research support services, the library can help to increase its research productivity and consequently the institution's ranking. According to Shoeb[8], the library remains an indispensable resource, whether one is working on a small research projector a large research grant.

2.2 Services Covered Under Research Support Services

Many different services have been covered under research support services. Keller[9] identified "institutional repositories, open access, bibliometrics and enhancement of research impact, support for research student and research data management" as the most important RSS.

Ali & Ahmed[10] found that "institutional repositories, article publishing, knowledge of IT tools, collection management, research excellence framework, training, scholarly communication, research data administration, intellectual property rights, copyright, metadata, file formats, licensing, data backups, ethics, structured thinking, trends awareness, bibliometrics, application of social media tools, research data management" are the part of the research support services. A good categorisation of research support services was provided by Si, et al.[11] who divided RSS into seven aspects "research data management, open access, scholarly publishing, research impact measurement, research guides, research consultation, and research tool recommendation". Awan, Richardson & Ahmed[5] segregated the research support services into four categories i.e. basic, more advanced, specialised and additional research support services.

Verma & Charu[12] investigated the research support services offered by the top fifty science and technology libraries according to the QS 2022 ranking and revealed that RDM, research guides, research consultation, research tools recommendation, scholarly publishing/ communication, open access initiatives, and training and workshops emerged as the prevailing categories of research support services. Visintini[13], *et al.* in their scoping review of literature on RSS found that creating a research support position was the most commonly reported service, followed by systematic review along with trending services like grant support, data management, research metrics, and institutional repository.

According to Osadebe & Okwor[14] research support services in Africa commonly included complimentary access to internet facilities, institutional repositories, information resources, originality checks, and training programs that focus on enhancing information literacy and research skills. Nickels & Davis[15] in their study of researchers at North Carolina State University found that the primary research support services offered by the library were identified as "collections, consultations, search strategies, scholarly communication support, data management planning, data visualisation support, and technology lending."

2.3 Availability of Research Support Services

Some studies have covered the availability of research support services and the opinions of users regarding

these services. Shoaib, Rasool & Anwar[16] examined the research support services provided by the university library of Pakistan during COVID-19 and suggested that "the university libraries should strengthen their digital resources." Fazal & Chakravarty[7] explored the use, satisfaction and awareness of research support services provided by the Bharathiar University through a survey and found that the researchers were well aware and satisfied with the traditional services such as library collection, interlibrary loan, CAS, and SDI, but there was a distinct unawareness about the latest services such as RDM and bibliometrics. Necia & Marei[17] accessed the specific research support services needs of faculty members in Agriculture of USA and found that faculty members required help with literature reviews, managing grants, writing grant proposals, research data management and data deposit from the library. Kennan, Corrall & Afzal[18] found that the services like "RDM, data curation, bibliometrics, systematic review/literature searching and digitisation of data" were in tremendous demand in the UK, Ireland, Australia and New Zealand.

Maryati[19], *et al.* in their study of university libraries in Indonesia proposed a business model and prototype design for research support services using nine key factors. Borrego & Anglada[20] discovered that the most crucial service was the institutional repository, followed by helping researchers with publication and evaluation processes, while services like data management, result dissemination and procurement of research funds were deemed less essential.

Adeniran & Oyovwevotu[1] in their study of Nigerian university libraries found that the most commonly utilised research support services were internet services, print resources, and e-resources, which were categorised into different types. Padhan & Naidu[21] investigated the research support services offered by 25 highly ranked Higher Education Institutions (HEIs) of the NIRF-2021 and found that HEI libraries excel in certain areas, including Institutional Repositories, electronic databases for theses and dissertations, and the maintenance of faculty research profiles but there was deficiency in the provision of research tools. Singh & Madhusudhan[22] focused on the innovative approaches to delivery of research support services using emerging technologies in academic libraries. Sumi & Kumar[23] conducted research on the RSS at Panjab University and discovered that faculty members were effectively utilising Remote Xs to access online content like electronic journals, e-books, conference proceedings, theses, research reports, and other library collections during the COVID-19 lockdown period.

2.4 Problems Faced by Researchers

Several studies highlighted the problems faced by researchers towards research support services. Borrego & Anglada[20] found that the lack of dedicated human resources for library research support was the main obstacle that prevented Spanish libraries from keeping up with their international counterparts. Adeniran & Oyovwevotu[1] reported that the researchers faced challenges related to network speed, remote access, and insufficient resource collection and recommended that libraries should offer regular updates on information resources, institutional repositories, database training, and guidance on literature review and research proposal writing. Nickels & Davis[15] identified significant challenges faced by researchers, including information overload, inadequate communication about resources and services, diverse skill sets and expertise, data storage, and changing technology. Howie & Kara[24] while exploring RSS in New Zealand university libraries found that funding for Article Processing Charges (APCs) was identified by multiple respondents as an issue of importance.

After analysing the available literature on research support services, it was noted that the majority of studies pertaining to research support services have predominantly emanated from foreign nations and very few studies have been conducted in the Indian context. Singh & Madhusudhan[22] also stated that "delivery of research support services in Indian educational institutions are under progressive stage, only few universities are engaging in effectively delivery of such types of services in open research world". So, the present study has been undertaken to explore the expectations of the faculty and researchers of MDU towards such services which will help the University Library to design LRSS for its users in the future. In the coming text the term LRSS has been used to refer to such services which falls under the purview of research support services.

3. OBJECTIVES

The present study is undertaken with the following objectives:

- To know the expectations of faculty members and research scholars towards library research support services;
- To study the problems faced by faculty members and research scholars to access/use the library research support services.

4. RESEARCH METHODOLOGY

A cross-sectional study was conducted on the faculty members and research scholars of Maharshi Dayanand University Rohtak, Haryana, India. The total population of this study was nearly 1320. Krejcie and Morgan[22] table was used for determining the sample size and simple convenient sampling was used for sample selection. The data was collected through a self-administered questionnaire. Keeping in view the research objectives, the questionnaire consisted of 42 statements related to the seven dimensions of LRSS. Total 400 questionnaires were distributed in person among the participants, out of which 224 were returned with a response rate of 56 %.

After discarding the questionnaires with incomplete responses, a total of 196 questionnaires were chosen for the study. The collected data was entered in MS Excel and data was transferred into a format suitable for analysis. The analysis was done using MS Excel and IBM SPSS. Descriptive statistics such as frequencies, percentages, and means were used to perform statistical analysis. Inferential statistics such as t-tests and one-way Anova were also used to determine significant differences between the groups.

5. DATA ANALYSIS

5.1 Demographic Profile

The demographic profile of the respondents has been highlighted in Table 1. Among the 196 respondents, 125 (63.78 %) were female and 71 (36.22 %) were male. Out of the total number, 82.65 % constituted the research scholars and 17.35 % were teachers. The study included participants from four distinct faculties - 50.51 % belonged to Sciences, 29.08 % to Social Sciences, 11.73 % to Management and 8.67 % to Law and Humanities. The respondents have been divided into three age groups - below 30 years (71.43 %), between 30 and 40 years (20.41 %), and above 40 years (8.16 %). All 34 teachers were having a Ph.D. degree while among the research scholars, 148 were pursuing a Ph.D. aftera post-graduate degree and 14 after M.Phil. degree. Around 79 % of the respondents had research experience of fewer than five years. Approximately 8 % of the participants had research experience between 6 and 10 years, while nearly 12 % of the respondents had more than 10 years of research experience.

Table 1. Demographic profile of respondents

Variables		Numbers	Percentage
Gender	Male	71	36.22
	Female	125	63.78
Designation	Teacher	34	17.35
	Research scholar	162	82.65
Subject faculties	Science	99	50.51
	Social science	57	29.08
	Management	23	11.73
	Law & humanities	17	8.67
Age	Below 30 years	140	71.43
	31-40 years	40	20.41
	Above 40 years	16	8.16
Qualifications	Post-graduate	148	75.51
	M.Phil	14	7.14
	Ph.D	34	17.35
Research experience	Below 5 years	155	79.08
	6-10 years	17	8.67
	Above 10 years	24	12.24

5.2 Expectations Towards LRSS

The respondents were asked about their expectations regarding research support services from the libraries. Table 2 highlights the expectations of researchers towards LRSS. Statements regarding seven dimensions of research support services - Database Services, Research Data Management Services (RDM), Institutional Repositories, Research Tools Services, Research Impact Measurement Services, Scholarly Communication Services and Infrastructure Facilities - were prepared on a five-point scale and the opinion of the respondents was sought on these dimensions. The expectations regarding the 'Database Services' had the highest mean score (4.68) among the seven services. Out of the total 196 respondents, 72.83 % strongly agreed that the library should provide database services, 22.96 % agreed, 3.83 % remained neutral on the matter, while only 0.26 % disagreed about this service. The next most expected service was regarding the 'Infrastructure Facilities' which had a mean score of 4.66, indicating that participants have more requirements of this service. This is also supported by the high percentage of participants who strongly agreed with this service (71.94 %) while many respondents agreed (23.37 %) and just a few disagreed (0.61 %). This indicates that users expect good infrastructure facilities from the libraries.

The expectations regarding 'Institutional Repositories' had a mean score of 4.49, which is a relatively high score, with the majority of participants strongly agreeing or agreeing with this service (50.70 % and 46.94 % respectively). 1.70 % respondents disagreed and 0.51% strongly disagreed towards the requirement of this service.

The mean score for 'Research Tool Services' was 4.47, which is also a high score, indicating that participants were well aware and required this service. The majority of the participants strongly agreed (62.40 %) and agreed (23.52 %) with the service, although many participants were neutral regarding the requirement of this service (12.81 %).

As regards to the 'Research Data Management (RDM) Services', the mean score was 4.37 which is lower as compared to the other services. The majority of the participants agreed or strongly agreed (51.43 % and 35.31 % respectively). The percentage of participants who were neutral towards this service was also relatively high at 12.35 %. It might be possible that respondents were less aware about the RDM service.

'Research Impact Measurement Service' also had a low mean score (4.30) as compared to other services. Almost half of the participants (48.85 %) agreed, while 33.16 % strongly agreed, 17.35 % remained neutral, 0.38 % disagreed and 0.26 % strongly disagreed towards the requirement of the 'Research Impact Measurement Service'.

The expectations regarding 'Scholarly Communication Services' had the lowest mean score of 4.23, indicating that participants might be less familiar with this service as compared to the other services. The percentage of

participants who strongly agreed with this service was also relatively low compared to the other services. Just over 45 % of the participants strongly agreed, 35.02 % agreed to the service while 18.65 % remained neutral which is the highest response for neutral among all the services.

Table 3 presents the results of the independent sample t-test and one-way Anova on various parameters for different services provided by the University. The numbers in the table are p-values of the statistical tests performed on the data. The data indicates that only the "Infrastructure Facilities" service has a significant difference between gender (p-value= 0.043) and Qualifications (p-value= 0.026). No significant differences were found with regard to other parameters in the expectations of the users indicating that the respondents had almost the same expectations regarding the various LRSS covered in the study.

5.3 Problems Faced by Researchers Regarding LRSS

The views of the respondents were also collected regarding the problems related to LRSS. The results of the responses are indicated in Table 4. The respondents were asked to rate the listed problems on a 5-point scale that spans from strongly agree to strongly disagree. The mean scores for each problem were calculated based on the responses of the survey participants. The mean scores are used to provide an overall indication of how strongly the problem is felt by the respondents. A higher mean score indicates that the problem is more serious and needs to be addressed more urgently. Based on the obtained mean scores shown in Table 4, it can be inferred that the most significant problem reported by the respondents was the inadequacy of funding for APC as the mean score was highest (3.31) for the statement "not adequate funding for Article Processing Charge (APC)". 19.90 % respondents strongly agreed and 22.96 % agreed with this problem.

The next problem which was rated highest by the respondents was "limited access to computers available in the university library" having a mean score of 3.21 and 12.24 % respondents strongly agreed and 37.76 % agreed to this problem.

Other significant problems reported by the respondents included "lack of training to use research support tools" (mean= 3.06), "lack of ICT skills" (mean= 3.03), "library services are not accessible from home" (mean= 2.98), "lack of training/consultation to use the services" (mean= 2.91), and "poor Internet connectivity/download speed" (mean= 2.84).

The lowest mean score (2.15) was for the problem statement "the library staff is not supportive" indicating that the library staff of the University was helpful and supportive. Other problems for which a lower mean

Table 2. Expectations towards services

Services	% age of responses					Mean
	SA	A	N	D	SD	
Database services	72.83	22.96	3.83	0.26	0.13	4.68
Research data management (RDM) services	51.43	35.31	12.35	0.82	0.10	4.37
Institutional repositories	50.70	46.94	10.03	1.70	0.51	4.49
Research tools services	62.40	23.52	12.81	1.02	0.26	4.47
Research impact measurement services	48.85	33.16	17.35	0.38	0.26	4.30
Scholarly communication services	45.04	35.02	18.65	0.97	0.32	4.23
Infrastructure facilities	71.94	23.37	3.98	0.61	0.10	4.66

"SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly disagree"

Table 3. Statistical differences in expectations

Services	Independent sample t-test		One way anova			
	Gender	Teachers and research scholars	Faculties	Age	Qualifications	Research experiences
Database services	.719	.970	.111	.567	.695	.768
Research data management (RDM) services	.994	.443	.520	.708	.135	.797
Institutional repositories	.632	.178	.893	.429	.147	.695
Research tools services	.764	.480	.738	.277	.165	.997
Research impact measurement services	.623	.721	.057	.590	.210	.964
Scholarly communication services	.589	.665	.091	.763	.405	.822
Infrastructure facilities	.043*	.116	.196	.078	.026*	.361

*** significant at 0.05 level of significance**

Table 4. Problems faced by the researchers

Statement	% age of responses					Mean
	SA	A	N	D	SD	
Library services are not accessible from home	18.37	22.96	12.76	30.61	15.31	2.98
Limited access to computers available in the university library	12.24	37.76	19.90	18.88	11.22	3.21
Poor internet connectivity/ download speed	14.29	18.37	18.88	34.18	14.29	2.84
Lack of ICT Skills	10.71	25.51	27.55	28.06	8.16	3.03
Lack of time to access services	6.12	26.02	21.43	37.24	9.18	2.83
The library staff is not supportive	2.04	9.18	15.31	48.47	25.00	2.15
The library website does not provide guidelines/ instructions/ handbooks to use available library services	4.08	16.84	19.39	45.92	13.78	2.52
Lack of training/consultation to use the services	7.65	28.06	20.92	34.69	8.67	2.91
Inflexible library operating hours	6.63	16.84	25.00	40.31	11.22	2.67
Lack of training to use research support tools	13.78	27.04	20.92	28.06	10.20	3.06
Not adequate funding for Article Processing Charge (APC)	19.90	22.96	30.10	21.94	5.10	3.31
Online library services remain down many times	9.18	17.35	27.55	35.20	10.71	2.79
Remote access services remain down/inaccessible many times	9.69	18.88	28.57	31.63	11.22	2.84
Library collection (books, journals, etc) in my area is not adequate	6.63	19.90	19.90	33.16	20.41	2.59
Library staff lacks knowledge about research	6.63	13.27	30.10	32.14	17.86	2.59

SA=Strongly Agree, A=Agree, N=Neutral, D=Disagree, SD=Strongly Disagree

score was found included- "the library website does not provide guidelines/ instructions/ handbooks to use available library services" (mean= 2.52), "the library staff lacks knowledge about research" (mean= 2.59) and "library collection (books, journals, etc.) in my area is not adequate" (mean= 2.59).

6. DISCUSSION AND CONCLUSION

The present study is a cross-sectional study of the opinion of researchers of Maharshi Dayanand University, Rohtak regarding their expectations towards LRSS and the problems associated with these services. The results indicate that the services falling under dimensions 'Database Services' and 'Infrastructural Facilities' were the most expected services by the researchers of the University. It can be inferred that the researchers expect that the libraries should have good infrastructural facilities along with subscriptions of scholarly databases to support research. The other services in the decreasing order of expectations were 'Institutional Repositories', 'Research Tools Services', 'RDM Services', 'Research Impact Measurement Services' and 'Scholarly Communication Services'. Overall, the results indicate that the respondents placed high importance on access to digital resources and technology infrastructure, which are crucial for research activities. Libraries need to continue to invest in and provide these services to meet the needs of their users. Moreover, the findings indicate a requisite emphasis for libraries to prioritise services encompassing Research Data Management, institutional repositories, research tools, research impact assessment, and scholarly communication, thereby fostering enhanced support for research endeavours. Further, the statistical analyses suggest that there are some differences in user opinion about the research support services based on gender and qualifications. However, the differences are not consistent across all services and user characteristics. The majority of the services did not show any statistically significant differences based on user characteristics.

The researchers also face certain problems regarding LRSS. The most significant problem reported by the respondents was the inadequacy of funding for APC, followed by limited access to computers in the university library. Other significant issues included the lack of training to use research support tools and ICT skills, along with poor internet connectivity. The library staff was found to be helpful and supportive. The study suggests that these issues need to be addressed by the university library on a priority basis.

The present study has some limitations as it only concentrates on the expectations of faculty members and research scholars associated with Maharshi Dayanand University regarding LRSS, along with the obstacles they encountered. To enhance the generalisation of results, the study can be further expanded to include multiple universities.

Research support services have emerged as important component of libraries worldwide but in Indian context such services needs more attention. Academic libraries, keeping in consideration the expectation of their users, should focus on providing specialised service known as LRSS in an effective and efficient manner to help the researchers in their research work. They should regularly

assess the research needs of its users in order to provide more effective and tailored research support. Also, they should "employ marketing mechanisms and strategies to advertise the availability of services"[26]. Thus, the focus of academic libraries especially university libraries should be towards investing in infrastructure, expanding their digital resources, promoting awareness of services and providing training and consultation to use research support tools and services.

REFERENCES

1. Adeniran, P.O. & Oyovwevotu, L. Academic library research support services: A review of Redeemer's university and the Nigeria natural medicine development agency's research activities. *Libr. Philos. Pract.*, 2019, 2753.
2. Forsman, M.; Ndinoshiho, J. & Poteri, E. Research support services of university libraries. *In* Empowering people: Collaboration between Finnish and Namibian university libraries, edited by Iivonen, Mirja; Helminen, Päivi; Ndinoshiho, Joseph; Sisättö & Outi. Tampere University Press, Tampere, 2012, 180–200.
3. Raju, R.; Adam, A.; Johnson, G.; Miller, C. & Pietersen, J. The quest for a deeper meaning of research support. Cape Town: University of Cape Town Libraries, 2015. doi: 10.15641/0-7992-2522-8.
4. M.D University. (n.d.). https://mdu.ac.in/ (Accessed on 13 February 2023)
5. Awan, M.H.; Richardson, J. & Ahmed, S. Current status of research support services in university libraries of Pakistan. *Digital Libr. Perspect.*, 2022, **38**(4), 412-428. doi: 10.1108/DLP-11-2021-0101.
6. Rebecca, A.B.; Malcolm, W. & Joanna, R. Developing new skills for research support librarians. *Aust. Libr. J.*, 2015, **94**(3),224–234. doi: 10.1080/00049670.2015.1041215.
7. Fazal, F.A. & Chakravarty, R. Role of library in research support: a study of Bharathiar university. *Libr. Philos. Pract.*, 2019, 2780. https://digitalcommons.unl.edu/libphilprac/2780/ (Accessed on 05 January 2023)
8. Shoeb, M.Z.H. Evidence of improved students' perceptions towards online research: Pre and post assessment study of information literacy and research support. *GKMC*, 2021, **70**(8-9), 842–857. doi: 10.1108/GKMC-04-2020-0054.
9. Keller, A. Research support in Australian university libraries: An outsider view. *Aust. Acad. Res. Libr.*, 2015, **46**(2), 73–85. doi: 10.1080/00048623.2015.1009528.
10. Ali, S. & Ahmed, S. Information literacy skills among library and information science professionals: a forecaster of research support services. *Libr. Hi Tech,* 2021, **40**(6), 1689-1704. doi: 10.1108/LHT-05-2021-0157.
11. Si, L.; Zeng, Y.; Guo, S. & Zhuang, X. Investigation and analysis of research support services in academic libraries. *Electron. Libr.*, 2019, **37**(2), 281–301. doi: 10.1108/EL-06-2018-0125.
12. Verma, V.K. & Charu. Research support services: An analysis of top science and technology institutions. Libr. Philos. Pract., 2023, 7602. https://digitalcommons.unl.edu/libphilprac/7602 (Accessed on 18 Sept. 2023).
13. Visintini, S., *et al*. Research support in health sciences libraries: A scoping review. *JCHLA/JABSC*, 2018, **39**(2), 56–78. doi: 10.29173/jchla29366.
14. Osadebe, N.E. & Okwor, R.N. Research support services in selected African university libraries. *Libr. Philos. Pract.*, 2021, 9682 1–13. https://digitalcommons.unl.edu/libphilprac/5222 (Accessed on 10 April 2023).
15. Nickels, C. & Davis, H. Understanding researcher needs and raising the profile of library research support. *Insights: The UKSG Jour.*, 2020, **33**, 1–13. doi: 10.1629/uksg.493.
16. Shoaib, M.; Rasool, S. & Anwar, B. Evaluating research support facilities to university students during COVID-19. *Libr. Philos. Pract.*, 2021, 4953. https://digitalcommons.unl.edu/libphilprac/4953 (Accessed on 15 December 2022).
17. Necia T.P.G. & Marei U.H. Research support services for the field of agriculture: IthakaS+R interviews and themes for libraries. *J. Agri. Food Inf.*, 2017, **18**(3-4), 306–326. doi: 10.1080/10496505.2017.1323639.
18. Kennan, M.A.; Corrall, S. & Afzal, W. "Making space" in practice and education: research support services in academic libraries. *Libr. Man.*, 2014, **35**(8-9), 666–683. doi: 10.1108/LM-03-2014-0037.
19. Maryati, I.; Purwandari, B.; Santoso, H.B., *et al*. Research support services in Indonesian academic digital libraries: A proposed business model and prototype design. *DESIDOC J. Libr. Inf. Technol.*, 2022, **42**(1), 18–29. doi: 10.14429/djlit.42.1.17108.
20. Borrego, Á. & Anglada, L. Research support services in Spanish academic libraries: An analysis of their strategic plans and of an opinion survey administered to their directors. *Publications*, 2018, **6**(4), 1–10. doi: 10.3390/publications6040048.
21. Padhan, D.K. & Naidu, G.H. 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. 2022, 197-207. http://ir.inflibnet.ac.in/handle/1944/2374 (Accessed on 18 Sept 2023).
22. Singh, B.P. & Madhusudhan, M. ICT based research support services in academic libraries: A new frontier to enhancing research integrity and productivity. *J. Knowl. Commun. Mgt.*, 2022, **12**(2), 128-149.

doi: 10.5958/2277-7946.2022.00010.9.

23. Sumi, S. & Kumar, J. Research support services of Panjab university library during lockdown period due to covid-19: A survey. *Libr. Philos. Pract.*, 2020, 4493. https://digitalcommons.unl.edu/libphilprac/4493.
24. Howie, J. & Kara, H. Research support in New Zealand university libraries. *New Rev. Acad. Libr.*, 2022, **28**(1), 7-36. doi: 10.1080/13614533.2019.1700535.
25. Krejcie, R.V. & Morgan, D.W. Determining sample size for research activities. *Edu. Psych. Measurement*, 1970, **30**(3), 607-610. doi: 10.1177/001316447003000308.
26. Asafu-Adjaye, M.A. & White, E. Exploring research support by academic librarians to faculty members. *Pract. Acad. Libr.: Int. J. SLA Acad. Div.*, 2023, **13**(1), 60-78.

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