

Research Support Services in Academic Libraries

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Present study explores the research support provision in India's Higher Educational Institution (HEI) libraries. Library websites of the top 25 ranked HEI's in the research domain of NIRF-2021, were investigated to know the status, provision, strength and weakness of research support services in academic libraries. Research-related visibility, resources, services, and outreach activities found on library websites were investigated to know the provision of research support services. Findings of the study reveal that HEI libraries are substantially well placed in Institutional repositories, e-database of Theses & dissertations, and faculty research profiles. However, comparatively poor visibility of research support tools and services on library websites is a concern. Promotional and outreach activities of HEI libraries are limited to the Remote Access platform and Training/orientation of subscribed tools and services. Uses of social media platforms are found to be very low by the HEI libraries.

Introduction

“Research” is the base for the development of the world and society. Financial, educational, industrial, and other welfare policies of governments around the globe are the outcome of the research. The accuracy in research leads to proper policy formation and implementation by the leadership of the government and private entities. Research centres, Universities, and Higher Educational Institutions (HEIs) are the core part of the research infrastructure of a country. Universities and HEIs are mandated to produce and promote ideas, theories, formulas, and standards through research and publications. Quality research by the academic and scholarly community is an integral part of the social and economic development of the nation (Kampa et al., 2020). Planning, literature, data, infrastructure, funding, collaboration, and sharing are the significant elements in a research process. Selection, acquisition, organization, preservation, and sharing are crucial for efficient and impactful research contributing toward social development. And that is why libraries, knowledge centres, and data centres are essential for the progress of a society. Academic research in the form of scientific publication is one of the primary criteria for measuring and ranking academicians and institutions in higher education. The international world university ranking organization, like the Quacquarelli Symonds (QS) world university ranking and National Institutional Ranking Framework (NIRF), uses research publications as one of the base criteria to rank the HEIs with higher impact and reputation. In an academic set-up, conventional or digitally advanced, the library’s role cannot be avoided in the institutional research process.

The academic library’s role has traditionally been to assist the parent institution’s teaching and research. While librarians continue to deliver services that are viewed as traditional, they are engaged in new and emerging roles (Ducas et al., 2020). Academic library service environments have significantly transformed

due to technological advancements, automation of operations, media diversification, diminished purchasing power, and expanding scholarly communication (Ball & Tunger, 2006). The libraries have been positioned as intermediaries and partners in educational institutions' academic and research life cycles (Borrego & Anglada, 2018). Libraries are active in identifying the basic materials for intellectual pursuit and study, with recent emphasis on curating research assets, organisational research outputs, digitising special collections, data curation, data management, Institutional repository, research tracking, and evaluation. In the digitally advanced scenario, libraries cater to user needs in a blended atmosphere, from print to electronic, acquisition to access, subscription to perpetual, and physical to virtual mode.

The investigations on the provision of research support services in libraries worldwide signify the future opportunities of academic libraries in the research lifecycle. In the Indian context, many studies are found on Institutional Repositories, Open Access Publishing, and Innovative Library Services, which are part of the research support services. However, no study was found covering research support services as a whole for academic libraries in India. With this identified gap, the present study explores the research support provision or services in libraries of Higher Educational Institutions (HEIs) of India. The strength, weaknesses, and prospects of HEI libraries in current research and academic scenario are highlighted.

2. Review of Literature

The finding of Si et al. (2019) reveals that 96.2% of the libraries provide research support services and believe it is the future of academic libraries. It further categorised research support services as research data management, open access, scholarly publishing, research impact measurement, research guides, research consultation, and recommendations for research tools. Dempsey (2017) examined the changing nature of research in digital environments and reported a shift in focus from locally owned or managed resources to a shared or joint structure at the network level in facilitation of resources and services in academic libraries. However, library professionals are confident and satisfied in their role in changing landscape of academic research with additional training on the interfering tools and technologies (Ducas et al., 2020).

The findings of Hansson and Johannesson (2013) reveal that the library's involvement in digital repository development and Open Access publication will become increasingly important for academic libraries in the coming years. Kennan et al. (2014) surveyed research support provisions in the academic libraries and reported the opportunities for academic libraries in research-related services like bibliometric, RDM, journal publishing platform, and grant writing support. The paper advocated advanced skill training among library professionals and the inclusion of research support skills in the academic programme of library science education.

In the last decade, a significant development in academic libraries has been recognised for the need to support research data management (RDM). Cox et al. (2019) found an advisory role of the academic library in research data services. The Research Data service becomes essential when the library combines text and data mining, bibliometric and artificial intelligence.

Open access resources are yet to be utilised to their fullest extent by the non-core researchers. Taylor (2021) describes how social media platforms like Twitter and Instagram are explored and used to promote the university's scholarly outcome for academic and research purposes. Twitter handle of the library was used extensively for sharing the research outcome through bulleted points in threads resulting in a visible increase in altmetric score of the deposited papers opting for systematic Open Access + service of the library.

Butler and Byrd (2016) assess the perception of students and librarians regarding the effectiveness of the personal consultation between a librarian and a student in academic research and publications. Based on the findings, the authors argue that provider pessimism, a feeling that the service rendered did not satisfy the patron's needs on the part of the librarian, exists in research consultations. The study also reveals that communication, particularly vocabulary, influences the teaching outcomes and perceptions of the effectiveness of research consultation. In an investigation of job descriptions in open research services as posted by academic libraries in the United Kingdom, Pontika (2019) found that the expected skills from an aspirant are communication skills, liaison skills, knowledge of policies on open access, institutional repository, research data management, funds, and related issues.

Brown et al. (2015) explore the specific challenges faced by the academic librarian in their transition period for the role of research data management. While traditional skills training are essential as librarians move to research support roles, there is also a critical need for informal training, mentoring, and support networks. Borrego and Anglada (2018), in their analysis of research support services in the Spanish academic library found that libraries are firmly associated with the institute's research activity depending on the institutional research policy.

The reviewed literature shows that "research support service" is an emerging future where libraries and librarians can contribute a lot and regain their central role in the research life cycle of an academic institution. Research data management, open access, scholarly publishing, research impact measurement, research guides, research consultation, and research tools recommendations are the emerging space for academic libraries to deliver the best of their expertise along with their conventional research services like bibliometric and institutional repositories. Though several studies have been done on research support services of academic libraries of developed countries, negligible survey on the subject is found in the Indian context. With this line, the present paper explores the provision of research support services in Indian academic libraries. The resources and services of Indian academic libraries concerning the institutional research paradigm are investigated to get a picture of research support provisioning in academic libraries of India. The study aims to know the strength, weaknesses, and prospects of research support services in the libraries of Higher Educational Institutions of India.

3. Objective of the Study

- ❖ To know the visibility of research support services in HEI libraries of India.
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- ❖ To know the research databases being subscribed as part of research support services in HEI libraries.
- ❖ To understand the academic library services being provided by HEI libraries.
- ❖ To understand HEI libraries' outreach and promotional activities as part of research support services. To present the best practices of academic libraries in research support services.

4. Methodology

After observation of library websites and reviewing the available literature, a 43-point checklist was prepared with following four aspects, 1) Tab and links visible on library websites relating to research, 2) Subscription for Research databases, 3) Library Services supporting scholarly research, and 4) Promotion and Outreach activity of the academic libraries. “Yes” and “No” variables were used to record the “found” and “not found” elements in library websites. The score was given with a summation of the “Y” value for ranking the HEI Libraries.

Library of the top 25 HEIs of India ranked in the National Institutional Framework (NIRF) 2021-research domain has been taken as samples for the study. Due to insufficient information on the website four institutes (TIFR, HBNI, ASIR, and BU) were excluded and finally, 21 library websites were investigated for the study. The library website of the sample institutions was scanned thoroughly from 25th-30th January 2022 and again verified from the 25th-28th February 2022. MS office 365, 2022 version was used for analysis and graphical presentation of the results.

4.1. Limitations of the Study

The study is limited to the top 25 Indian HEI libraries' websites ranked in NIRF 2021 in the research domain. The information found on library websites only was considered in the study. There may be resources and services not mentioned on the library websites of HEIs.

5. Findings

5.1. Research visibility in library websites of HEIs

The dedicated library web pages, which generally give the details of resources and services, were evaluated to understand the library provisions for supporting institutional research in HEIs.

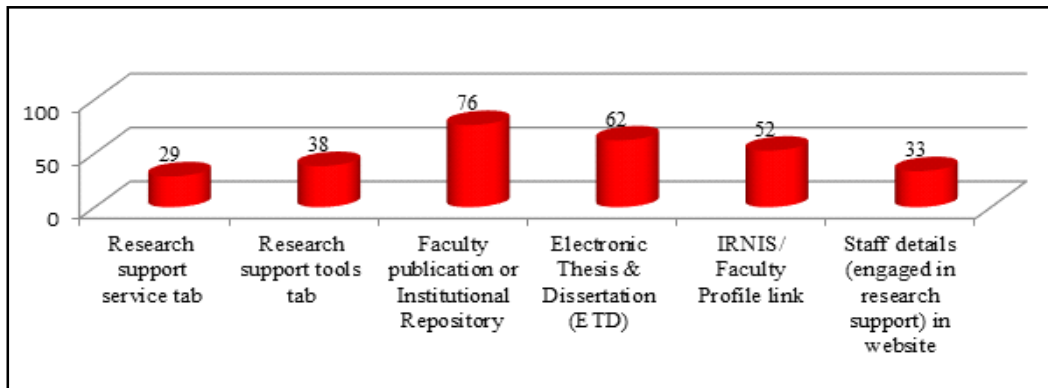


Figure 1: Visibility of Research in Library WebPages (in %)

It is found that most of the HEI libraries are doing well in Institutional Repositories (IR) 76 % and Electronic Thesis and Dissertations (ETDs) 62%. Giving research profiles of faculty members is also adopted well by the academic libraries; 52% of libraries have done the same. Though 33% of libraries have given the contact and profile details of library staff engaged in research support services, the direct link to research support tool (38%) and research support services (29%) with a tab on the library website was found to be relatively minor in these libraries.

5.2. Subscriptions of Research Databases

Research databases are organised collections of computerised information or data such as periodical articles, books, graphics, and multimedia that can be searched to retrieve data. Databases can be general or subject-oriented with bibliographic citations, abstracts, and full text. Since databases provide powerful search tools for narrowing results, users find these databases very useful during the study period. Including full-text databases which carry full-text content, the bibliographic, abstracting, statistical, financial databases, AI-based text matching, writing/grammar/correction tools, and other tools like single-window search help researchers in their research and documentation.

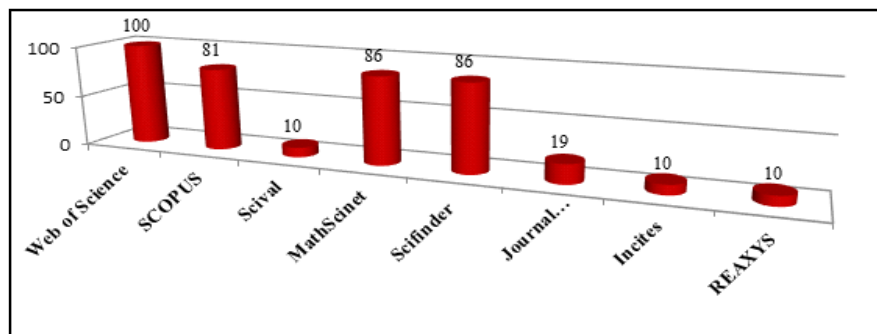


Figure 2: Subscriptions of Bibliographic Databases in (%)

Web of Science (100%) from Clarivate, SCOPUS (81%) from Elsevier, MathSciNet (86%), and Scifinder (86%) are the major indexing and abstracting databases being subscribed majorly by the HEIs in India. Other bibliographic databases with a tiny percentage of subscriptions include JCR, Scival, Incites, and REAXYS.

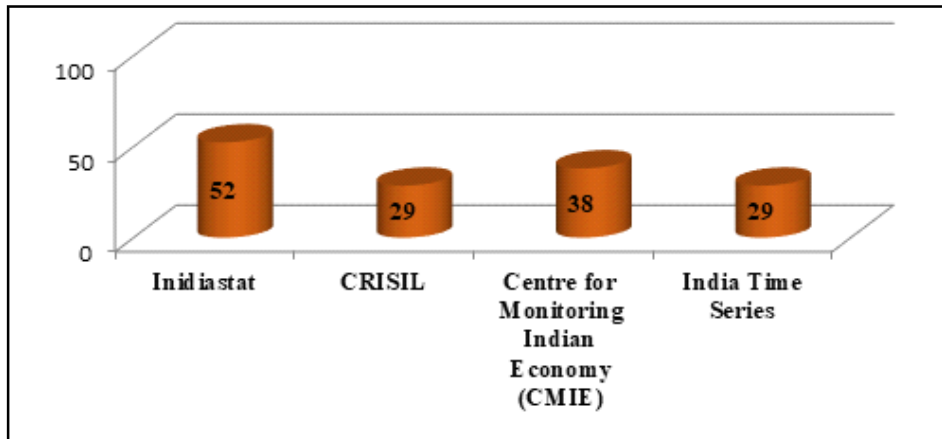


Figure 3: Subscriptions of Economic and Financial Resources

In economic and financial resources, Indiatat (52%), CMIE (38%), CRISIL (29%), and India Time Series (29%) databases are in subscriptions by HEI libraries.

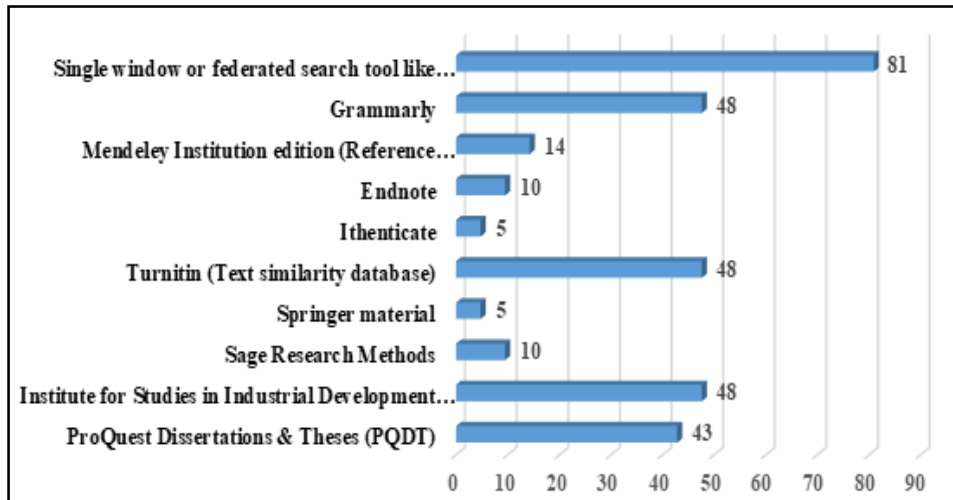


Figure 4: Subscription of Other Research databases and Writing tools

In other research tools and services, more links to the resources found in subscriptions of HEI libraries are Single window or federated search tools (81%), Grammarly (48%), Turnitin (48%), ISID (48%), PQST (43%) with other resources and tools like Mendeley, Endnote, and Sage research methods.

5.3. Library Services of HEIs Supporting Scholarly Research

Document delivery or e-mail reference service (71%) is provided by most of the HEI libraries, followed by the service of a self-help guide (62%) on the library webpage for accessing and curating the data and literature from the library resources. 43% of HEI libraries have a tab FAQ detailing the library activities in the institutional scholarly research. The core library research support found in the literature review, Open access publication support, and research data management are listed in a tiny percentage of libraries, 10%, and 5%, subsequently. However, 29% of HEI libraries have provisions for plagiarism detection.

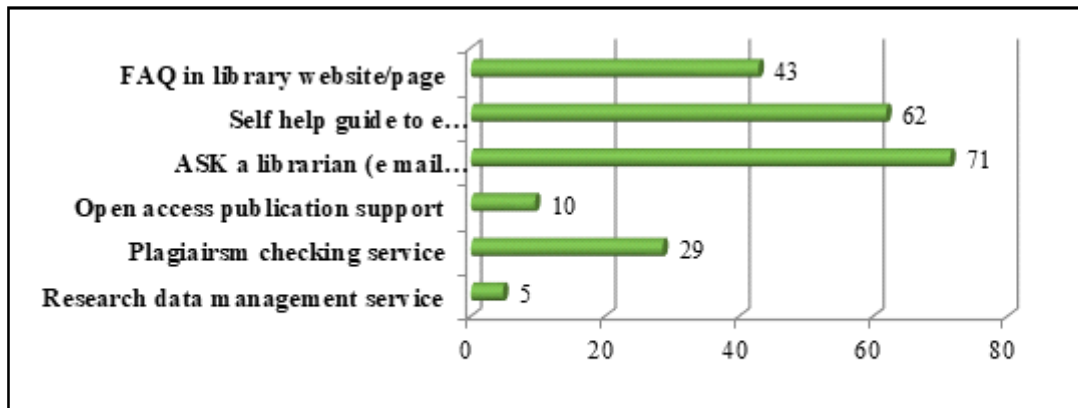


Figure 5: Library Research Support Services on websites

5.4. Promotion and Outreach Activity of HEI libraries

The promotion of institutional research increases the use of library resources and helps the users reach the potential library resources and services that could remain unexplored. The outreach activity of the library also allows the users to promote their published or unpublished research and academic work. Social media pages, library events, and community activities promote institutional research, maximise resource use, and earn a good reputation in the academic community.

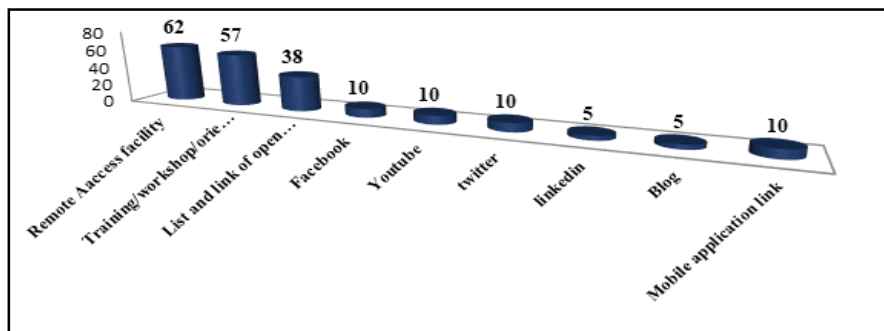


Figure 6: Promotion and Outreach Activity of HEI Libraries

Remote access to subscribed resources is provisioned in 62% of HEI libraries. Orientation, training, and workshop on resources are also being organised in many libraries (57%). However, significantly a smaller number of HEI libraries have social media pages. 38% of HEI libraries have a LinkedIn account placed on the webpage. 10% of libraries have their account on YouTube, Twitter, or Facebook. Also, 10% of libraries have links to their library mobile application page.

5.5. The score of HEI Libraries in Research Support Services

Table 1: The score of HEI Libraries

Institute	Abbreviated Name	NIRF Rank in Research (2021)	Score in the survey	Position
Indian Institute of Technology Delhi	IITD	4	30	1
Indian Institute of Technology Bombay	IITB	3	24	2
Indian Institute of Technology Roorkee	IITR	7	22	3
Indian Institute of Technology Madras	IITM	2	20	4
Indian Institute of Technology Kharagpur	IITKGP	5	19	5
Indian Institute of Technology Kanpur	IITKNP	6	19	6
Jawaharlal Nehru University, New Delhi	JNU	18	19	7
Indian Institute of Science, Bengaluru	IISC	1	18	8
Jadavpur University, Kolkata	JU	17	17	9
University of Hyderabad	UH	25	17	10
University of Delhi	DU	11	16	11
Indian Institute of Technology (Indian School of Mines), Dhanbad	IITISM	20	16	12
Indian Institute of Science Education & Research, Pune	IISERP	16	15	13
Indian Institute of Technology Guwahati	IITG	9	14	14
Aligarh Muslim University, Aligarh	AMU	24	13	15
Indian Institute of Technology Hyderabad	IITH	15	12	16
Vellore Institute of Technology, Vellore	VIT	12	9	17
Jawaharlal Nehru Centre for Advanced Scientific Research	JNCASR	19	9	18
All India Institute of Medical Sciences	AIIMSD	8	8	19
Banaras Hindu University, Varanasi	BHU	14	8	20
Institute of Chemical Technology, Mumbai	ICT	21	5	21

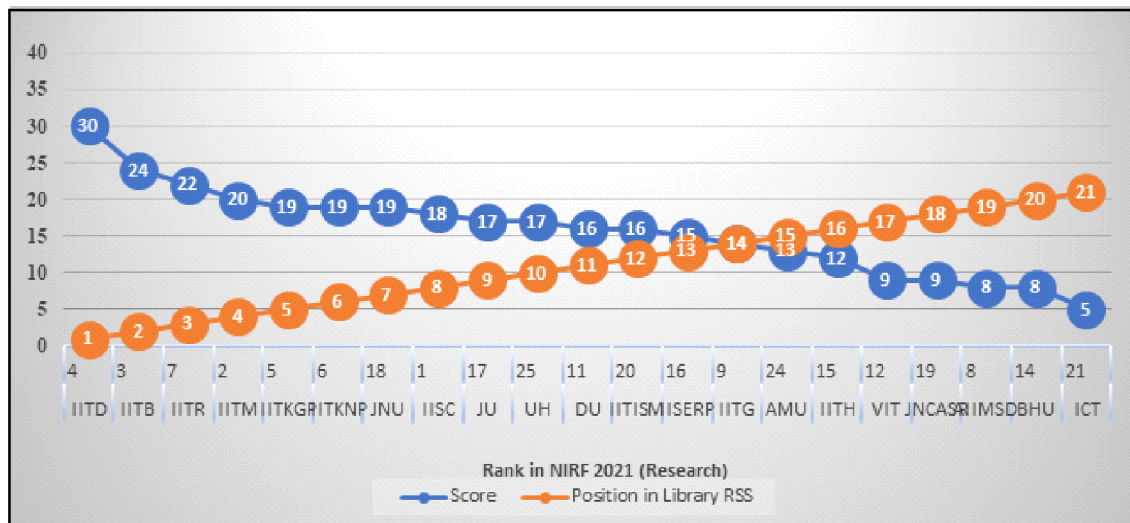


Figure :7 Score of HEI Libraries in Research Support Services

IITs are the top scorer in library research support services, IIT Delhi being top with a score of 30, followed by IIT Bombay (24), IIT Roorkee (22), IIT Madras (20), IIT Kharagpur, IIT Kanpur, and Jawaharlal Nehru University, scoring 19 each in the study.

6. Conclusion

Institutional Repository, Faculty publications, ETD and IRINS faculty profiling, are visible in a good number of HEI libraries in India. The listing of research support tools and services is relatively poor on the library websites. Even dedicated staff details for research support services are found in very few libraries. This shows HEI libraries are lagging in dynamism with the research support role, particularly in making the service or resources competitively visible to its users. It may be due to administrative or technical reasons. The subscription of research databases, reference and language tools (SCOPUS, Web of Science, Grammarly, Turnitin) signifies the future role of libraries in the institutional research paradigm for administration, management, end-user training and uses. Ask a Librarian, self-help guide and frequently asked questions (FAQ) are found on most of the HEI library's websites, though their uses are doubtful by the users. The study founds user training, workshop, and remote access facility for the subscribed resources are HEI libraries' main outreach activity. The uses of social media like Facebook, YouTube or Twitter are very poor by HEI libraries of India. HEI libraries have a huge opportunity to work and maximise the outreach activity by using academic and general social media platforms.

Among Indian HEIs, IIT libraries are in good position when it comes to research support services. IIT Delhi is at the top, followed by IIT Bombay, Roorkee, Madras, Kharagpur, and Kanpur, followed by Jawaharlal Nehru University as per the result. Best practices of research support services of HEI libraries need to be promoted so that the academic library's research role can be redefined in the digitally advanced scenario.

7. Suggestions

- i. In a digitally advanced academic environment, research support services are the emerging future of academic libraries with huge opportunities.
- ii. Research-related activity of libraries must be defined and placed with proper terminology on the library websites.
- iii. Fullest use of the resources and services through outreach activity and collaboration via various platforms must be prioritised among the library activities.
- iv. Research data management, Open access publishing, citation and reference, awareness and use of research tools & technology are the areas in which every academic library should work and contribute to the institutional research work.
- v. Libraries should increase the use of official social media platforms and groups for the promotion and awareness of library resources and services among users.
- vi. Best practices in research support services must be promoted to encourage the other academic libraries in the country to enhance academic research quality.
- vii. Training and re-skilling library staff in new tools and technology relating to modern scientific and scholarly research is the need of the hour for academic libraries.
- viii. The core expertise of librarians like citation, referencing, and research impact measurement with concepts like altmetrics need to be sharpened and delivered to enrich the quality and quantity of academic research.
- ix. The professional core expertise of librarians like citation, referencing, and research impact measurement with concepts like altmetrics need to be sharpened and delivered to enrich the quality and quantity of academic research.

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