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## Reference Source and Services in CSIR-IGIB, CSIR-NPL, CSIR-NISCAIR, CSIR-NISTADS and CSIR-CRRI

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**Title: Reference Source and Services in CSIR-IGIB, CSIR-NPL, CSIR-NISCAIR, CSIR-NISTADS and CSIR-CRRI**

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**Abstract:**

*The purpose of the present study is to know the available reference sources and reference services provided by the select CSIR laboratory libraries situated at Delhi. The author use survey method and use questionnaire as a tool for data collection. A total number of 5 questionnaires personally distributed to the library In-charge and received total 5 questionnaires. The major findings of the study revealed that CSIR-NISCAIR library has highest number of collection i.e. 250000 and also has highest number of reference collection i.e.50000. All the select libraries have encyclopedia, dictionaries, government documents, yearbooks and Annuals in their reference collection in print form. In electronic form most of the library have abstract & index and standard. All the select libraries except CSIR-NISTADS offered DRS to its user. E-mail reference services provided by all the select libraries except CSIR-NISTADS and the provision of others modes of DRS are vary from library to library. The select libraries aware its users to make use of reference sources and services through promotional activities and through interaction with users. The major problems faced by the select libraries is also varies from library to library.*

**Keywords:** Reference Source; Reference Service; CSIR, Digital Reference service; CSIR-IGIB; CSIR-NISCAIR; CSIR-CRRI; CSIR-NISTADS; CSIR-NPL

## **Introduction**

Libraries and information centers provides different types of information sources and services to its user. Reference and information sources play a very important role to meet the information needs of various kinds of its users. Ogunniyi, Efosa and Sheji (2013) define Reference sources are those sources that are permitted to use within the library and not for outside the library. According to (Aina, 2004; Ogunniyi, Efosa and Sheji (2013) these documents contain diverse information on any topic, place, event, or any person. Some of the examples of these sources are encyclopedias, biographies, dictionaries, bibliographies, atlases, manuals, yearbooks, gazetteers, guidebooks, index, abstracts etc.

Reference and information Service is a kind of personal service provided by the reference staff of the library to individual user (Singh, 2012). It helps to bring personal contact between a library user and the needed document, thus save the time of the user (Kumar, 2003). Reference and information services is the core service provided by the library in order to meet the information needs of patrons and act as a bridge between the reference staff, information sources and the library users (Quadri and Abiodun, 2017).

With the advent of ICT, many advances have been made in the format of reference sources and in the modes of providing reference service in the library (Singh, 2003). In this digital age, Digital reference sources and services have assist librarians to deliver more relevant and productive library services and also assist the users in making valuable use of the library resources without stress. The introduction of digital reference sources and services in the library has played a very crucial role in information searching and in getting answers of the queries received from library users. The great advantage of these digital sources and services are easy access, use and make possible for library users to use library services outside library without any time delay without stress (Umaru, Aghadiuno and Namu, 2018).

Reference services are receiving a lot of attention in special libraries in India and perform admirably in this regards. There are numerous examples of special libraries, which are actively assisted to their parent organizations with reference service. Thus, it can be said that the future of reference services in special libraries seems promising (Kumar, 2003).

## **Council of Scientific & Industrial Research (CSIR)**

The Council of Scientific & Industrial Research (CSIR) is renowned research and development organization in the field of science and technology. CSIR has a pleasant network of 37 national laboratories, 39 outreach centres, 3 Innovation Complexes and 5 units all over the country. There are 3460 active scientists backed by about 4350 scientific and technical staff.

CSIR covers a wide range of science and technology disciplines – from radio and space physics, geophysics, drugs, chemicals, genomics, oceanography, biotechnology and nanotechnology to mining, instrumentation, aeronautics, environmental engineering and information technology (CSIR, 2021). Libraries have always been a store house of information and providing vital guidance on how to translate that information into useful knowledge for the benefit of society. With the advent of ICT, libraries are turn into knowledge centres. Libraries can best facilitate the networking of knowledge and people if the needed content are provided in a machine readable format. This ensures that CSIR knowledge resources are put to the best possible use. With this view, CSIR renamed their libraries as Knowledge Resource Centres in the year 2008, for providing information support to the scientific and technical staff of CSIR laboratories (Verma & Kalra 2015).

The CSIR recently announced the merger of CSIR-National Institute of Science Communication And Information Resources (CSIR-NISCAIR) and CSIR-National Institute of Science, Technology and Development Studies (CSIR-NISTADS) into a new institute called CSIR- Institute of Science Communication & Policy Research (CSIR-NIScPR). The researcher collects data before the merger of the above two institute.

### **Objectives of the study**

The aim of present study is to identify the present status of reference sources and services being provided in the select CSIR laboratory libraries.

1. To found the various kinds of reference and information sources available in the print and electronic form in select libraries.
2. To know the various types of reference and information services provided in the select libraries.
3. To identify the various modes of digital reference services provided in the select libraries.
4. To know the provision of budget allotted to information sources and services in the select libraries.

### **Scope and Limitation of the study**

1. The scope of the present study is limited to CSIR laboratory libraries.
2. The present study is limited to reference sources and services.
3. The present study covers only those CSIR laboratory libraries which are situated in Delhi.
4. The present study focused on Library In-charge.

### **Research Methodology**

For conducting the study, the researcher used survey method and questionnaire was selected as a tool of data collection. CSIR laboratory Libraries was selected for study. For carry out the research the researcher selects five CSIR laboratory libraries situated in Delhi namely

CSIR-National Physical Laboratory (CSIR-NPL), New Delhi, CSIR-Institute of Genomics and Integrative Biology (CSIR-IGIB), Delhi, CSIR-Central Road Research Institute (CSIR-CRRI), New Delhi, CSIR-National Institute of Science Communication And Information Resources(CSIR-NISCAIR), New Delhi, CSIR-National Institute of Science, Technology And Development Studies(CSIR-NISTADS), New Delhi. A total number of 5 questionnaires were personally distributed to Library In-charge of select CSIR laboratory libraries and received total 5 questionnaires. The researcher accessed the website of select CSIR laboratory for collected necessary information. The collected data were analyzed, tabulated and interpreted to compare reference sources and services offered by select CSIR laboratory libraries to its user.

## **Review of Related Literature**

Various studies have been conducted by different authors to know the present status of reference sources and services in different types of libraries in India and abroad. Some important studies related to the present study are as follows. Singer (2010) in his study explained the historical background of the ready reference collection and their recent advancement. These collections were still exist and serve the function of providing access to those material that is regularly ask at the reference desk. Lederer (2016) in his study focused on the importance of core print reference collection and argued that the importance of these resources depends on availability, cost, convenience, historical research, actual use of print, online irritants and future librarians' understanding of reference resources. On the other hand Ritchie and Genoni (2007) try to find the balance between the use of print reference sources and electronic reference sources in terms of answering reference queries at the Northern Territory Library, Australia and found that both types of reference sources are important.

Lesley (2009) in his study explained the life cycle of digital reference sources in academic libraries by focusing on subscription databases: assessment of resources, selection procedure and policies, acquisition issues, Web presentation and maintenance, archiving and de-selection. Iroaganachi, & Ilogho (2012) conducted a study on the use of reference books in Covenant University, Nigeria and discovered that students prefer online reference resources, for this reason there was a less use of print reference materials. As a result, it suggested that the library should expand its information literacy skills program for user in order maximizes the use of online reference resources. Umaru, Aghadiuno, & Namo, (2018) carried out a study to know the digital reference resources and services provided by federal university libraries in North Central Nigeria. it was found that the library has various kind of resources in his reference collection like EBooks, encyclopedias , dictionaries, audio visual files , newspapers, fulltext journals, , and following are the digital reference services provided by the libraries Email, text based chat/instant messaging, collaborative digital reference services (CDRS), and virtual reference desk. Major challenges faced by the these libraries in implementation and management of digital reference source and services are lack of budget, poor internet supply, power supply, cost of subscription/packages.

Vasanthkumar (2016) in his study examined present status of DRS services provided in the 6 government sponsored academic and research libraries in Karnataka. It revealed that DRS provided in the library under study is varies from library to library and needs improvement. It also stated present strength of their e-content like e-journals, e-books, e-bibliographies e-archives, and search engines. Another similar kind of study conducted by Singh, (2012) in the 4 University libraries of North India and discussed the strength and weakness of existing digital reference service offered in the libraries. The researcher attempted to make a comparison of selected libraries on the basis of DRS Services provided by these libraries. It was revealed that Central Library System of Delhi University is the best among four libraries under study in terms of offering digital reference services, which includes E-mail, Chat, Ask a librarian, Reference desk Service, Question Point Reference Service, Search Engine Reference Services, User Feedback form service, Web Based User Education, FAQ and Collaborative Reference Service. Reshmi & Jana (2018) in his study compared Higher Education Institutions of Government of India situated in West Bengal in terms of providing DRS and found that IIT KGP and Viswa-bharati universities are the best in this regard. Baro, Efe, & Oyeniran (2014) in his study revealed that the face-to-face traditional reference desk was identified as most used channel through which librarians receive reference queries in Nigeria, followed by Facebook page of library and SMS. Instant messaging (IM) and e-mail were found as the least used channels by the users.

### Data Analysis and interpretation

The data collected by the researcher through the questionnaire are tabulated and interpreted.

**Table1. Library Details**

Sr. N.	Year of Establishment	IGIB	NPL	CRRI	NISCAIR	NISTADS
1	Year of Establishment-Library	1988	1950	1952	1963	1981
2	Classification scheme used	DDC 20 ed.	UDC	UDC	UDC	DDC
3	Library automation software	DELOLUS 2.0	Libsys	KOHA	KOHA	KOHA
4	Average user per day	10-12	50+	10-12	5-6	4 to 5

Table1 shows data on year of establishment, classification scheme use, library automation software use and average users visited per day in the select CSIR laboratory libraries. The library of CSIR-NPL was established in the year 1950 followed by CSIR-CRRI and CSIR-NISCAIR in the year 1952 and 1963 respectively. Among 5 CSIR laboratory libraries 3 libraries uses UDC for classification of books i.e. CSIR-NPL, CSIR-CRRI and CSIR-NISCAIR only 2 CSIR laboratory library uses DDC for classification of books namely CSIR-IGIB and CSIR-NISTADS. Out of 5 CSIR laboratory libraries 3 libraries uses KOHA for library automation i.e.

CSIR-CRRI, CSIR-NISCAIR, CSIR-NISTADS; remaining 2 libraries CSIR-IGIB and CSIR-NPL uses DELOLUS 2.0 and Libsys respectively. Among 5 libraries, highest number of users visited in CSIR-NPL users in a day i.e. average 50+

**Table2. Library Membership**

Sr. N.	Library Member	IGIB	NPL	CRRI	NISCAIR	NISTADS
1	Scientists	40	134	85	28	15
2	Research scholars	350	100	0	50	20
3	Technical Staff	10	188	120	100	7
4	Administrative Staff	16	155	55	100	30
	Total	416	577	260	278	72

Table2 represent data on library membership in select CSIR laboratory libraries situated in Delhi which is divided into four major categories namely scientists, Research scholars, technical staff and administrative staff. The Library of CSIR-NPL has highest numbers of library members i.e. 577 followed by CSIR-IGIB i.e. 416 and CSIR-NISCAIR i.e. 278 respectively. According to category of library members from scientific staff, CSIR-NPL library has maximum number of library members among all 5 CSIR laboratory libraries i.e. 134. From research scholar, CSIR-IGIB library has maximum number of library members among all 5 CSIR laboratory libraries i.e. 350. From technical staff, CSIR-NPL Library has maximum number of library members among all 5 CSIR laboratory libraries i.e. 188. From administrative staff, CSIR-NPL library has maximum number of library members among all 5 CSIR laboratory libraries situated in Delhi i.e. 155.

**Table3. Library Staff**

Sr. N.	Library Staff	IGIB	NPL	CRRI	NISCAIR	NISTADS
1	Professional	2	6	5	7	1
2	Non-professional	0	0	1	9	1
	Total	2	6	6	16	2

Table3 shows data on library staff currently working in CSIR laboratory libraries situated in Delhi which is divided into two categories namely professional staff and non-professional staff. Highest number of staff is currently working in CSIR-NISCAIR library i.e. 16 which is followed by CSIR-NPL and CSIR-CRRI both has same number of library staff i.e. 6. In both categories of library staff CSIR-NISCAIR have highest number of working staff i.e. 7 professional staff and 9 non-professional staff.

It is also found that none of the select CSIR laboratory libraries have designated reference staff but the other professional staff of the library works in the reference section according to the user's needs and answer reference queries.

**Table4. Library Collection**

Sr. N.	Library Collection	IGIB	NPL	CRRI	NISCAIR	NISTADS
1	Total Library Collection	8000	100000	90000+	250000	28000
2	Total Reference Collection	3200	15000	10000+	50000	5000
	Total Percentage of Reference Collection	40%	15%	11.11%	20%	17.85%

Table 4 indicates total collection of library available in the select CSIR laboratory libraries. CSIR-NISCAIR library has highest number of collection i.e. 250000 followed by CSIR-NPL library i.e. 100000 and CSIR-CRRI library i.e. 90000 (approx). In terms of reference collection, highest number of reference collection available in CSIR-NISCAIR library i.e. 50000 followed by CSIR-NPL library i.e. 15000 and CSIR-CRRI library i.e. 10000 (approx). CSIR-IGIB library has 40% reference collection in the total library collection which is highest among all the select CSIR laboratory libraries.

**Table5. Reference Sources are available in Library- Print Form**

Sr. N.	Reference Sources	IGIB	NPL	CRRI	NISCAIR	NISTADS
1	Biographies	✓	✓	✓	✗	✗
2	Dictionaries	✓	✓	✓	✓	✓
3	Encyclopedia	✓	✓	✓	✓	✓
4	Bibliographies	✓	✓	✓	✓	✗
5	Maps, atlas and Globe	✓	✗	✓	✗	✗
6	Abstract and Indexes	✓	✓	✓	✓	✗
7	Manuals and Handbooks	✓	✓	✓	✓	✗
8	Calendars and Almanacs	✗	✗	✓	✗	✓
9	Government document	✓	✓	✓	✓	✓
10	Yearbooks and Annuals	✓	✓	✓	✓	✓
11	Gazetteers and Guide Books	✓	✓	✓	✗	✗
12	Theses/ Dissertations	✓	✓	✓	✓	✗
13	Patents	✗	✗	✓	✓	✗



14	Standards	✗	✓	✓	✓	✗
15	Directory	✗	✓	✓	✓	✓

Table5 shows reference sources available in the select CSIR laboratory libraries in print form. It is observed that encyclopedia, dictionaries, government documents, yearbooks and Annuals are available in all the select CSIR laboratories in print form. Others reference sources like bibliographies, abstract and index, manuals and handbooks and thesis and dissertation are available in 4 CSIR laboratory libraries except CSIR-NISTADS. Directories are available in 4 CSIR laboratory libraries except CSIR-IGIB.

**Table6.Reference Sources are available in Library- Electronic Form**

Sr. N.	Reference Sources	IGIB	NPL	CRRRI	NISCAIR	NISTADS
1	Biographies	✗	✗	✗	✗	✗
2	Dictionaries	✗	✗	✗	✗	✗
3	Encyclopedia	✗	✗	✗	✗	✗
4	Bibliographies	✗	✗	✗	✗	✗
5	Maps, atlas and Globe	✗	✗	✗	✗	✗
6	Abstract and Indexes	✗	✓	✓	✓	✗
7	Manuals and Handbooks	✗	✗	✗	✓	✗
8	Calendars and Almanacs	✗	✗	✗	✗	✗
9	Government document	✗	✓	✗	✓	✗
10	Yearbooks and Annuals	✗	✗	✗	✗	✗
11	Gazetteers and Guide Books	✗	✗	✗	✗	✗
12	Theses/ Dissertations	✗	✓	✗	✓	✗
13	Patents	✗	✓	✗	✓	✗
14	Standards	✗	✓	✓	✓	✗
15	Directory	✗	✓	✗	✓	✗
16	Audio-Visual Reference Sources	✗	✗	✗	✓	✗

Table6 indicate data on reference sources available on electronic form in the select CSIR-laboratory libraries. In is found that abstract and index and standard have highest frequency which is available in 3 CSIR laboratory libraries namely CSIR-NPL, CSIR-CRRRI and CSIR-NISCAIR. Government documents, thesis & dissertation, patents and directories are available in 2 CSIR-laboratory libraries namely CSIR-NPL and CSIR-NISCAIR. It is also found that Manuals & handbooks and audio-video reference sources are available only in CSIR-NISCAIR.

**Table7 Databases subscribed by the Library**

Sr. N.	Databases	IGIB	NPL	CRRI	NISCAIR	NISTADS
1	Web of science (WOS)	✓	✓	✗	✓	✓
2	Derwent Innovations Index(DII)	✓	✗	✗	✗	✗
3	Transport	✗	✗	✓	✗	✗
4	Engg. Index	✗	✗	✓	✗	✗
5	ICONDA-CIB	✗	✗	✗	✗	✗
6	JCCC	✓	✗	✗	✗	✗
7	Current Content	✗	✓	✗	✗	✗
8	INSPEC	✗	✗	✗	✗	✗
9	Springer Journal Archive	✓	✓	✗	✗	✗
10	Emerald Journal Archive	✗	✓	✗	✗	✗
11	ACS Journal archive	✓	✓	✗	✓	✗
12	Delphion	✓	✗	✗	✗	✗
13	WIPS	✗	✗	✗	✗	✗
14	Questal	✗	✗	✗	✗	✗
15	J-Gate	✗	✓	✓	✓	✗
16	Annual Reviews	✗	✗	✗	✗	✗
17	Xrefer	✗	✗	✗	✗	✗
18	Library and Information Science abstract	✗	✗	✗	✗	✗
19	Journal Citation Report (JCR)	✓	✗	✗	✓	✗
20	Essential science indicator	✗	✗	✗	✓	✗

Table7 represent data on databases subscribed by the select CSIR laboratory libraries. It is observed that Web of Science database have highest frequency which is subscribed by all select CSIR laboratory libraries except CSIR-CRRI. ACS Journal archive database subscribe by 3 CSIR laboratory libraries namely CSIR-IGIB, CSIR-NPL CSIR-NISCAIR and J-Gate database subscribed by 3 CSIR laboratory libraries namely CSIR-NPL, CSIR-CRRI, CSIR-NISCAIR. None of the libraries subscribed Library and Information Science abstract, WIPS ,Questal, INSPEC and ICONDA-CIB.

**Table8 Participation of library in consortium**

Sr. N.	Consortium	IGIB	NPL	CRRRI	NISCAIR	NISTADS
1	E-Shodhsindhu	✗	✓	✗	✗	✗
2	CSIR- NKRC	✓	✓	✓	✓	✓

Table8 shows data on participation of the select CSIR laboratory in consortium. It is found that all the select libraries have participation in the CSIR-NKRC consortium. Among 5 select CSIR laboratory library only 1 library have also participate in E-Shodhsindhu i.e. CSIR-NPL

**Table9 Reference Services provided in Library**

Sr. N.	Reference Services	IGIB	NPL	CRRRI	NISCAIR	NISTADS
1	Query answering service	✗	✓	✓	✓	✗
2	Orientation tours	✗	✓	✓	✓	✗
3	Assistance in the use of reference books	✗	✗	✓	✓	✓
4	Assistance in the use of library catalogue/OPAC	✗	✓	✓	✓	✓
5	Assistance in the location (or searching) of documents	✗	✓	✓	✓	✓
6	Provision of specific information	✗	✓	✓	✓	✗
7	Provision of general information	✓	✓	✓	✓	✗
8	Reservation of documents	✗	✓	✓	✗	✗
9	Guides and Handouts	✗	✓	✓	✗	✗
10	Reader's advisory service	✗	✓	✗	✗	✗
11	Holding of library exhibitions	✗	✗	✗	✗	✓
12	Display of current periodicals	✓	✓	✓	✓	✓
13	User education	✗	✓	✓	✗	✗
14	Indexing and abstracting services	✗	✓	✓	✓	✗
15	Maintenance of clippings	✗	✓	✗	✗	✗
16	Contributing to or preparing library publications	✗	✓	✗	✓	✗
17	Compilation of bibliographies	✗	✗	✗	✗	✗
18	Maintenance of vertical files	✗	✗	✗	✗	✗
19	Issue of library permit to casual users (non members)	✗	✓	✗	✓	✗
20	Reproduction of documents	✗	✗	✗	✓	✗
21	Information literacy sessions	✗	✓	✗	✗	✗
22	Referral service	✗	✓	✓	✓	✗
23	Maintenance of special files	✗	✓	✗	✗	✗

24	Selective dissemination of information	✗	✓	✗	✓	✗
25	Research assistance and consultation	✗	✓	✓	✗	✗
26	Audiovisual presentations	✗	✓	✗	✓	✗
27	Translation services	✗	✗	✗	✗	✗
28	Database searches	✗	✓	✓	✓	✗

Table 9 shows different types of reference services provided by the select CSIR laboratory libraries. It is found that all the select laboratory libraries 'Display of current periodical' service. The provisions of different types of reference services are differ from library to library. 'Assistance in the use of library catalogue/OPAC', 'Assistance in the location (or searching) of documents' and 'Provision of general information' are provided by 4 select CSIR laboratory libraries. 'Query answering service', 'Orientation tours', 'Assistance in the use of reference books', 'Provision of specific information', 'Indexing and abstracting services', 'Referral service' and 'databases search' provided by 3 select CSIR laboratory libraries. None of the libraries provides 'Compilation of bibliographies', 'Maintenance of vertical files' and 'Translation services'.

**Table10 Digital Reference Service in library**

Sr. N.	Digital Reference services	IGIB	NPL	CRRRI	NISCAIR	NISTADS
1	Library provided Digital reference service	YES	Yes	YES	YES	No
2	Start of Digital Reference services	More than 1-2 years	More than 5 years	More than 5 years	More than 5 years	-

Table 10 shows the present status of providing digital reference service in the select CSIR laboratory libraries. It is found that all the select libraries except CSIR-NISTADS provides digital reference services to its users in which 3 CSIR laboratory libraries (CSIR-NPL, CSIR-CRRRI, and CSIR-NISCAIR) started digital reference services more than 5 years ago.

**Table 11 Modes of providing DRS Services**

Sr. N.	Modes of DRS Services	IGIB	NPL	CRRRI	NISCAIR	NISTADS
1	E-mail reference	✓	✓	✓	✓	✗
2	Instant messaging (IM)	✗	✗	✗	✗	✗
3	Ask A librarian	✓	✗	✗	✗	✗
4	Chat reference	✗	✓	✗	✗	✗
5	Web based User Education	✗	✗	✗	✗	✗

6	Chatterbot	X	X	X	X	X
7	Mobile reference	X	✓	X	✓	X
8	User feedback from service	X	X	X	X	X
9	Web form	X	X	X	X	X
10	FAQs	X	X	X	X	X
11	Bulletin Boards	X	X	X	X	X
12	Voice over Internet Protocol (VoIP)	X	X	X	X	X
13	Search Engine Reference Services	X	X	X	X	X
14	Video-conferencing	X	✓	X	✓	X
15	Web contact centre	X	X	X	X	X
16	Social Network (Through institutions ID)	X	✓	X	X	X
17	Online path finder	X	X	X	X	X
18	Virtual Reference Desk	X	X	X	X	X
19	Digital reference robots	X	X	X	X	X
20	24/7 Reference	X	X	X	X	X
21	Collaborative digital reference	X	X	X	X	X

Table 11 shows different types of digital reference services provided by select CSIR laboratory libraries. It is found that all the libraries expect CSIR-NISTADS provides e-mail reference services. Mobile reference service & video conferencing reference service are provided by CSIR-NPL and CSIR-NISCAIR. Ask A librarian reference service provides by CSIR-IGIB and Social Network (Through institutions ID) reference service provides by CSIR-NPL. None of the select CSIR laboratory library provides Instant messaging (IM), Web based User Education, Chatterbot, User feedback from service, Web form, FAQs, Bulletin Boards, Voice over Internet Protocol (VoIP), Search Engine Reference Services, Web contact centre, Virtual Reference Desk, 24/7 Reference, Online path finder, Digital reference robots, Collaborative digital reference services.

**Table 12 Users Awareness program**

Sr. N.	Awareness Program	IGIB	NPL	CRRRI	NISCAIR	NISTADS
1	Orientation program	X	✓	X	✓	X
2	Virtual Library tour	X	X	X	X	X
3	Library web site	X	X	X	✓	✓
4	Interaction with users	X	✓	X	✓	✓
5	Library's promotional activities	✓	X	✓	✓	X
6	Guidance	X	X	X	✓	X
7	Information Literacy session	X	X	X	X	X
8	Training	X	✓	X	✓	X

Table 12 shows different types of awareness program conducted by select CSIR laboratory libraries to make aware its users about the reference sources and services. It is found that majority of the libraries make its users aware through library promotional activities and through interaction with users.

**Table13 Evaluation method for reference sources and services**

Sr. N.	Evaluation Methods	IGIB	NPL	CRRRI	NISCAIR	NISTADS
1	Interview	✗	✗	✗	✗	✗
2	User's survey	✗	✗	✗	✗	✗
3	Users' feedback	✗	✗	✗	✗	✗
4	Case studies	✗	✗	✗	✗	✗
5	Observation	✗	✓	✗	✓	✗
6	Analysis of question logs	✗	✗	✗	✓	✗
7	Review of reference transcripts	✗	✗	✗	✓	✗

Table13 present data on evaluation methods uses by select CSIR laboratory libraries to know the usefulness of the reference sources and services provided by the library. It is found that only two libraries namely CSIR-NPL and CSIR-NISCAIR evaluation his reference services through different methods and most uses evaluation method is observation which is followed by both the libraries

**Table14 Problems facing Libraries in relation to reference sources and services**

Sr. N.	Problems	IGIB	NPL	CRRRI	NISCAIR	NISTADS
1	Inadequate funding	✓	✓	✗	✗	✓
2	Inadequate staffing	✗	✓	✗	✓	✓
3	Space Problem	✗	✗	✓	✗	✓

Table 14 shows different types of problems faced by select CSIR laboratory libraries in relation to reference sources and services. It is found that 3 libraries namely CSIR-IGIB, CSIR-NPL, CSIR-NISTADS face the problem of inadequate funding. 3 libraries namely CSIR-NPL, CSIR-NISCAIR, CSIR-NISTADS face problems related to staff. CSIR-CRRRI and CSIR-NISTADS have space problems.

**Table 15 Library Budget**

Sr. N.	Budget	IGIB	NPL	CRRI	NISCAIR	NISTADS
1	2015-2016	5000000	9435000	4500000	5000000	1000000
2	2016-2017	5000000	15300000	4900000	5500000	1200000
3	2017-2018	5000000	15500000	4500000	8500000	1000000
4	2018-2019	5000000	15500000	4500000	8000000	1200000
5	2019-2020	5000000	15500000	4500000	8500000	600000

Table 15 shows allocation of budget to select CSIR laboratory libraries during the last five years. In the year 2015-2016, highest amount of budget allotted to CSIR-NPL i.e. 9435000 followed by CSIR-IGIB and CSIR-NISCAIR i.e. 5000000. In the year 2016-2017, highest amount of budget allotted to CSIR-NPL i.e. 15300000 followed by CSIR-NISCAIR i.e. 5500000 and CSIR-IGIB 5000000. In the year 2017-2018, highest amount of budget allotted to CSIR-NPL 15500000 followed by CSIR-NISCAIR i.e. 8500000 and CSIR-IGIB i.e. 5000000. In the year 2018-2019, highest amount of budget allotted to CSIR-NPL i.e. 15500000 followed by CSIR-NISCAIR i.e. 8000000 and CSIR-IGIB i.e. 5000000. In the year 2019-2020, highest amount of budget allotted to CSIR-NPL i.e. 15500000 followed by CSIR-NISCAIR i.e. 8500000 and CSIR-IGIB i.e. 5000000.

#### **Provision of budget to reference sources and services**

When the librarian were asked about how much amount they spent on reference sources and services every year. It is found that there is no fixed amount of budget spent on reference sources and services it depends upon the demand of the users.

#### **Findings, Discussion and Conclusion**

The findings of the study indicates that CSIR-NISCAIR library has highest number of library collection which includes S & T monographs, CD-ROM databases and electronic resources, periodicals, foreign periodicals, open access journals, bound volumes of journals etc. In terms of total reference collection available in the library, CSIR-NISCAIR also has highest number of reference collection which includes Encyclopedias, Dictionaries, Bibliographies, Abstract and Index, Manuals and Handbooks, Yearbooks & Annuals, Government Documents, Thesis & Dissertations, standard, Patents and directories.

CSIR-IGIB has 40% reference collection in his total library collection which is the highest percentage of reference collection among all the select CSIR-Laboratory libraries. CSIR-NISCAIR library has highest numbers of library collection and highest number of reference collection but has only 20% reference collection in their total library collection.

The finding of the study reveals that encyclopedia, dictionaries, government documents, yearbooks and Annuals are available in all the select CSIR laboratories in print form. The

availability of the other types of reference sources like bibliographies, abstract and index, manuals & handbooks, thesis & dissertation and directories are varies from library to library. Due to advancement of ICT, CSIR laboratory libraries also purchased reference sources in electronic form to provide information at the desk of scientific and technical staff of the parent institution. It is found that abstract & index and standard have highest frequency which is available in 3 CSIR laboratory libraries namely CSIR-NPL, CSIR-CRRI and CSIR-NISCAIR. The availability of others types of e-reference sources are varies from library to library like Government documents, thesis & dissertation, patents and directories are available in 2 CSIR-laboratory libraries and Manuals & handbooks and audio-video reference sources are available only in 1 library. It is also found that none of the library has encyclopedias, dictionaries, bibliographies, biographies Maps, atlas & Globe, Calendars & Almanacs, Gazetteers & Guide Books in electronic form.

The findings of the present study reveals that all the select CSIR laboratory libraries expect CSIR-NISTADS providing DRS services to its users Out of 4 libraries which providing digital reference service, 3 CSIR laboratory libraries (CSIR-NPL, CSIR-CRRI, CSIR-NISCAIR) started digital reference services more than 5 years ago. Among Various types of digital reference services provided by the select libraries e-mail reference service is offered by all the select libraries except CSIR-NISTADS. Provision of other types of digital reference services like Mobile reference service, video conferencing reference service, Ask A librarian reference, Social Network (Through institutions ID) are vary from library to library. It is also found that none of the libraries proving following types of digital reference services i.e. Instant messaging (IM), Web based User Education, Chatterbot, User feedback from service, Web form, FAQs, Bulletin Boards, Voice over Internet Protocol (VoIP), Search Engine Reference Services, Web contact centre, Virtual Reference Desk, 24/7 Reference, Online path finder, Digital reference robots, Collaborative digital reference services.

CSIR- NISTADS is the only CSIR laboratory which is not provided digital reference services the main reason behind this the CSIR-NISTADS facing major problem related to library staff, library budget and less space. In terms of the library staff, the library has only 1 professional staff and 1 non professional staff. In terms of budget, the lowest amount of budget allotted to the library among all the select CSIR-laboratory. In terms of space related problem, the library is small in size as compared the libraries of CSIR-NPL, CSIR-CRRI and CSIR-NISCAIR.

The findings of the shows that there are various types of awareness methods use by select CSIR-laboratory libraries aware its user about the available reference sources and reference services offered. Among various methods library promotional activities and through interaction with users are mostly uses by select CSIR laboratory. Only two libraries namely CSIR-NISCAIR and CSIR-NPL uses various evaluation techniques to know the utilization of digital reference



sources and services and the most common evaluation techniques use by these libraries is observation.

The finding of the study reveals that the highest amount of budget allotted to CSIR-NPL during the last five years from the year 2015-2016 to 2019-2020. It is also found that there is no fixed amount or percentage of budget in the total library budget which is allotted to specifically for reference sources and services and it depends upon the requirements of the users.

In the last the researcher come to the conclusion the selected CSIR Laboratory libraries are extremely involved in providing reference sources and services. The libraries have a good number of reference collection in print form but in electronic form the most of the libraries have abstract & index, standards, Government documents, thesis & dissertation, patents and directories but none of the library have encyclopedias, dictionaries, bibliographies, biographies Maps, atlas & Globe, Calendars & Almanacs, Gazetteers & Guide Books in their e-collection. These libraries provide traditional reference services in a better way. But in case of digital reference services, these services offered through only few modes like e-mail, Mobile reference service, video conferencing reference service, Ask A librarian reference, Social Network (Through institutions ID). As most of the select libraries started to provide digital reference service since 5 years ago but none of the library provided DRS through the following modes: Instant messaging (IM), Web based User Education, Chatterbot, User feedback from service, Web form, FAQs, Bulletin Boards, Voice over Internet Protocol (VoIP), Search Engine Reference Services, Web contact centre, Virtual Reference Desk, 24/7 Reference, Online path finder, Digital reference robots, Collaborative digital reference services. The select CSIR laboratory libraries need to develop its e-reference sources collection and start others modes of providing digital reference services mentioned above.

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