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Awareness of Discovery Tool among Library Professionals: A Survey

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Abstract

The aim of this study to find out the awareness, use of discovery tool among library professionals. The study preferred the survey method and a structured questionnaire tool for gathering data. Finding of the study that library professionals need to aware of the new technology related to the library activities using federated searching, discovery tool, next-generation catalog and web-scale discovery tool. In this paper analysed and found that the awareness of ICT and knowledge management required to the library professionals. The library professionals (more than 98%) aware of the library software terminology and they do not know the other new terminology, i.e. Discovery Tool, Federated Search, Facet Search, Web-Scale Discovery and Next-Generation Catalog.

1. Introduction

"Everyone thinks of changing the world, but no one thinks of changing himself."- Leo Tolstoy

In the present day, the changing way of Information Communication & Technology (ICT) and Information & Knowledge Management (IKM) services to be provided by the library. Most of the academic institution to be used Integrated Library Management Software (ILMS) and Library Automation Software (LAS) for library housekeeping work. These libraries provide the search interface for online or off-line OPAC (Open Public Access Catalog) for users. In OPAC user can search only the bibliographic data of the books and find the book according to availability on the shelf. Many libraries archive the institution document like publications, thesis and dissertations, newspaper-clipping, annual report, culture activities photos and videos, and etc. These libraries use an institutional repository or digital archival software for the same. They also subscribed the e-journals, e-databases, e-books, e-patent, and etc. for as per users need. On the searching point of view many difficulties to search one by one of every platform related to the topic. The library needs a discovery tool and federated search

tool for searching all the available library platform using the single search box — the following software related to discovery tools and federated search tools.

Commercial Software:

- EBSCO Discovery Service (Ebsco Host)
- ExLibris (Primo Central)
- Encora (Innovative Interface Inc.)
- Summon (ProQuest)
- World Cat Local (OCLC)

Open Source Software:

- Blacklight
- Fac-Back-OPAC
- LibraryFind
- Rapi
- SOPAC
- Vufind

Main object of this survey to get the information for awareness among the library professional and use of discovery tools by the library professionals. Because of time to be changed professional library grow-up the skills and knowledge daily. As per Dr S. R. Ranganathan fourth law of library science, i.e. Save the time of reader and staff. After using the discovery tool/ federated search tool (FST), the user will satisfy the searching result on a single search box and not waste time for searching on a different platform.

2. Discovery Tool: An Overview

In a library, suppose one user search a book on "Cryptography" in OPAC after search results do not provide related to the user's need. Then the user wants to search e-journals and e-book on "Cryptography". In this situation, the user will open the individual site on e-book publication wise or vendor wise and same follow-on e-journals search. Now the user wants to search published work on their institute faculty, staff and research scholars. Then this situation user will search on institutional repository site if available in the institute. The user may be confused in this case because no one provides all information on one single search platform, just like google. The user can filter, change the condition of filtering any time then immediately show on the site. This type of problem faces every library because the various type of online resources available in the library, but they cannot search through the single search box. This problem generates the discovery tool, federated search, next-generation catalog and web-scale discovery.

Today, various type of commercial as well as open source software available on discovery tool and federated search in the market. The complicated situation of library staff to aware day to day new technology generate on this discovery. Now "A discovery tool provides a single search box for the user to search all the resources available in the library as well as subscribed resources." There are many discovery tools available, i.e. Ebsco Discovery

Service, ProQuest-Summon, AquaBrowser, Knimbus, Vufind, and etc. The below figure describe to all the related query of the central aspect, after using the discovery tool/ federated search tool (FST) in the library.
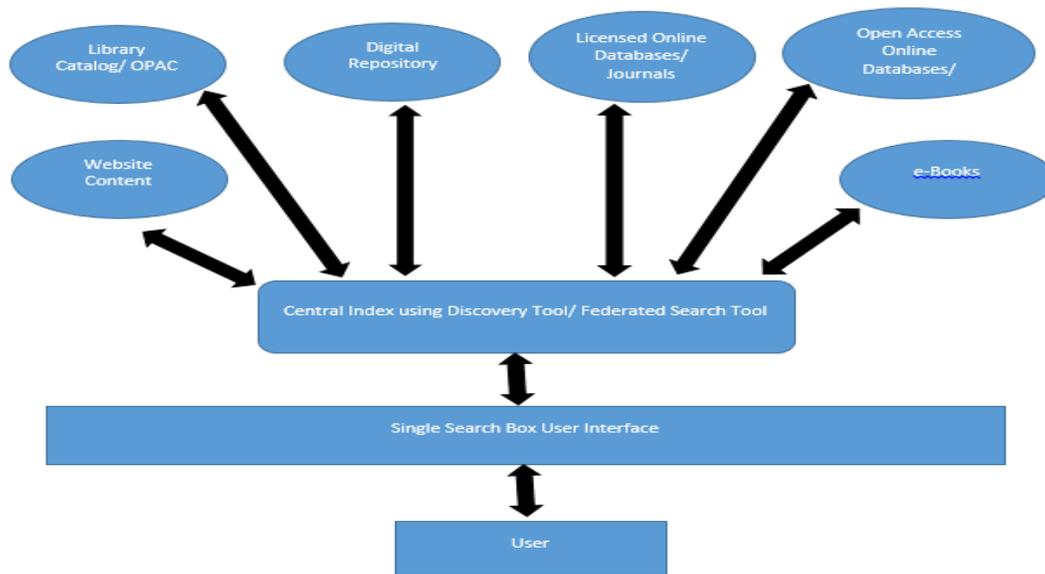

Figure 1: Single Search Box Model for Federated Search

3. Literature Review

During the last decade, some article published on the discovery tool, federated search tool (FST), next-generation catalog, web-scale discovery and facet searching. Most of the article to be published the feature and the status, whether it is user-friendly or not. Very few articles published on awareness of discovery tool and federated search tool.

The web-scale discovery provides a single search box for queries that refine the content from a variety of resources (Chand, 2012)[1]. Discovery tools help the users as well as library staff to search the library resources, institutional repositories, open access content and the subscribed external resources at the same time within a single search box (Kumar, 2018)[2]. Next Generation Library Catalog some point discussed as -

- It is not a catalog,
- It avoids multiple databases,
- It is bent on providing services against search results,
- It is built using things open

(Morgen, Definition of Next Generation Catalog, Chapter 3)

Federated search tool (FST) retrievable performance was more important than the interface usability. The average weight of 62 per cent for the system retrievable and 38 per cent for interface usability. The overall evaluation showed that the FST based on the XML gateway rated slightly higher than the FST based on the Z39.50 protocol (Hassan, 2015). FST also simplify the search process by allowing users to dedicate more time to interpreting and integrating the information they find rather than searching for it (Labelle, 2007). Libraries need to decide whether they should better engage with some subject areas that under-utilise library discovery or indeed (Inger, 2013).

Most of the library customize systems as per required need but nobody support of open-source software in local. Then the technical support was the biggest challenge to implementing open-source software in the library (Collins & Rathemacher, 2009).

4. Objectives

- To find out the current status of library professionals awareness about the discovery tool, federated search tool and next-generation catalog.
- To check the status of library professionals, they know the new technology in the field of library and information science.
- To find the most used of a discovery tool, federated search tool and next-generation catalog

5. Methodology

In this study, the survey method used and a questionnaire tool for gathering data and study the awareness of discovery tool among the library professionals. A structured questionnaire was designed and distributed to collect data from library professionals in the questionnaire fundamental questions framed awareness purpose and written merely on the direct means of the questions. Maybe the respondent not confuse or dilemma during the filling time of the questionnaire. A random sampling used to collect data with a specific profession only related to the library and information science field.

6. Data Analysis and Findings

Total 100 questionnaires circulated in the library professionals during PhD coursework held at School of Studies Library and Information Science, Jiwaji University Gwalior from 21st April 2016 to 30th July 2016 and National Workshop held at NIT Rourkela from 6th June 2016 to 10th June 2016. Only 87 filled questionnaire received from 46 (52.87%) male and 41(47.13%) female respondent. In this survey, the male respondent interested comparatively female respondent. Data collected in tabular format and analysed with the help of MS-Excel software, for a better understanding of the awareness of library professionals.

Category	No. of Respondent	Percentage
Questionnaire Distributed	100	100
Questionnaire Received	87	87
Questionnaire Select for Study	87	100
Gender (N=87)		
Male	46	52.87
Female	41	47.13
Qualifications (N=87)		
B.L.I.Sc.	7	8.05

M.L.I.Sc.	72	82.76
M.Phil.	1	1.15
PhD.	2	2.30
PhD Pursuing	1	1.15
M.Sc. B.Ed.	1	1.15
Not Answer	3	3.45

Table 1. Demographic Information

Most of the respondent 72 (82.76%) M.L.I.Sc. Degree and 7(8.05%) B.L.I.Sc degree 2 (2.30%) PhD 1, and M.Phil., PhD pursuing, M.Sc., B.Ed. One respondent each, 3(3.45%) respondent does not fill their qualifications.

The main aim of this survey is to find out the awareness of the discovery tool among library professionals. In the survey, collect data into three categories, i.e. Student, Research Scholars and Working Professionals. In table 2 and figure 2 display the working professionals 51 (58.62%) much interested compare to student 23(26.43%) and research scholars 13 (14.94) — almost library professionals are working as library trainee, Library assistant, professional assistant, assistant librarian, librarian and scientist in different organisations in all over India.

Category	No. of Respondent (N=87)	Percentage
Student	23	26.4
Research Scholar	13	14.9
Working Professional	51	58.6

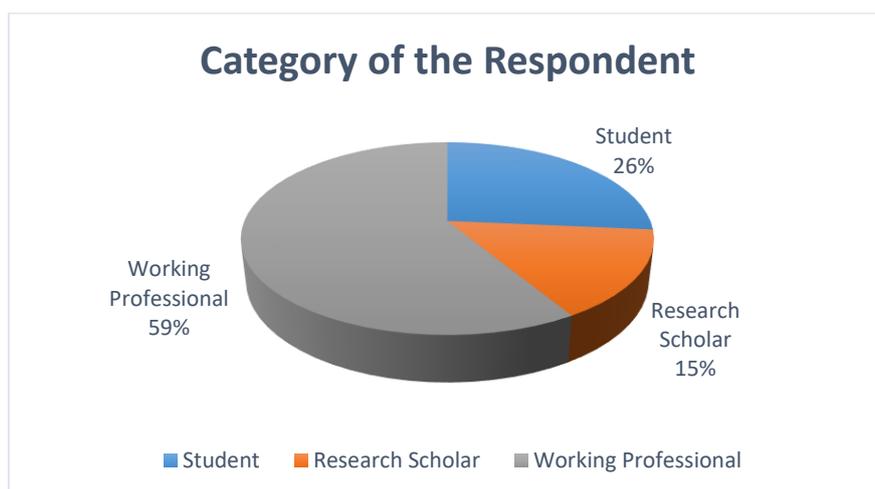**Table 2. Category of the Respondent**

Figure 2. Category of the Respondent

In Table 3 and figure 3, the study of awareness the library professionals on essential terminology, i.e. library software, facet searching, federated searching, web-scale discovery, next-generation catalog and discovery tool. As per analysed data, the professional library needs to orient or improvement for the new technology related to the library.

Library Software: The most significant number 86 (98.85%) library professionals known library software instead of one (1.14%) respondent because they were not library professional, but they were interested in library activities. Many library software is available in the market proprietary software (Libsys, SOUL, SLIM, and etc) as well as open source software, i.e. Koha, NewGenLib, E-Granthalaya, CDS/ISIS, and etc.

Facet Searching: A more than half number 54(62.1%) library professionals know about the facet searching instead of 32(36.8%) not know. Then need to be aware of facet searching concepts in the library. As per Wikipedia "A Faceted search is a technique which involves augmenting traditional search techniques with a faceted navigation system, allowing users to narrow down search results by applying multiple filters based on the faceted classification of the items".

Federated Searching: A very less number 33 (37.9%) library professionals know about federated searching instead of 51(58.6%) not know and 3(3.4%) respondent not answer. As per Wikipedia "Federated search is an information retrieval technology that allows the simultaneous search of multiple searchable resources. A user makes a single query request which were distributed to the search engines, databases or other query engines participating in the federation."

Web-scale discovery: A very less number 22(25.3%) library professionals know about the web-scale discovery instead of 57(65.5%) not know and 8(9.2%) respondent not answer.

Next Generation catalog: A very less number 39(44.8%) library professionals know about the next generation catalog instead of 42(48.3%) not know and 6(6.9%) respondent not answer. The traditional library catalog (OPAC) changed into a Next Generation library catalog using a discovery tool or web-scale discovery tool (Breeding, 2012).

Discovery Tool: Only 42(48.3%) library professional knows and not know each of the about discovery tool and 3 (3.4%) respondent not answer. As per Wikipedia "Discovery tool, allow the user, through a single search box, to search a base index of metadata as well as many of the library's digital resources such as subscribed databases, the catalog, and institutional repository".

Now we can say that library professionals know about library software (98.9%) and facet searching (62.1%) and same in discovery tool (48.3%) professionals know and same not know. So library professionals very need to aware of the new technology of library and information science and their latest activities.

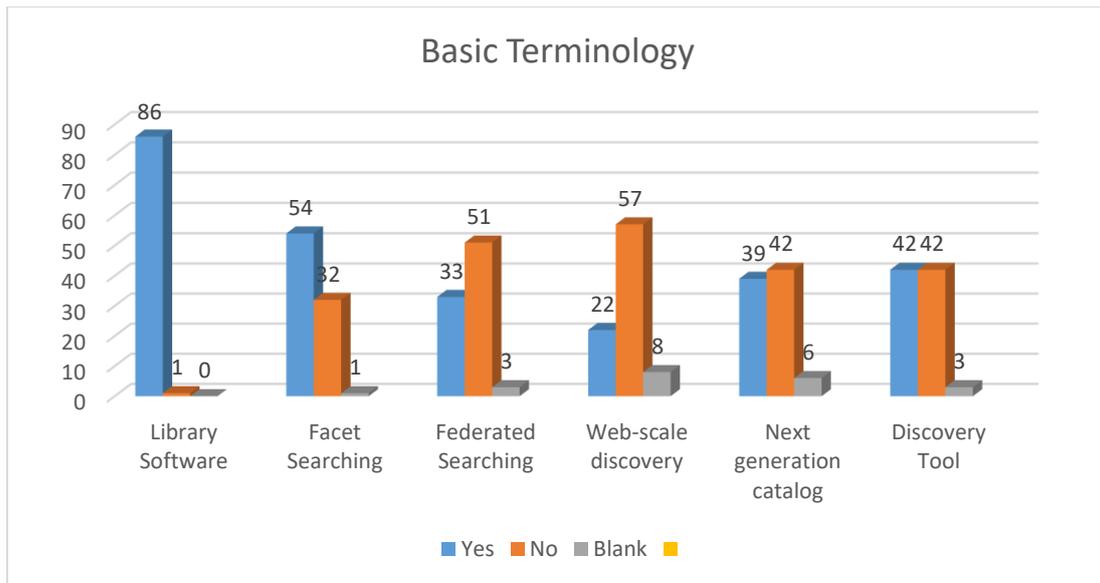|	Library Software	Facet Searching	Federated Searching	Web-scale discovery	Next generation catalog	Discovery Tool
Yes	86(98.9%)	54(62.1%)	33(37.9%)	22(25.3%)	39(44.8%)	42(48.3%)
No	1(1.1%)	32(36.8	51(58.6%)	57(65.5%)	42(48.3%)	42(48.3%)
Blank	0(0%)	1(1.1%)	3(3.4%)	8(9.2%)	6(6.9%)	3(3.4%)
Total	87(100%)	87(100%)	87(100%)	87(100%)	87(100%)	87(100%)

Table 3. Do you know/ aware about……?

Figure 3. Awareness of Terminology Status

In Figure 4, 55 (63%) library professionals not know the name and not use discovery tool or services in your working place and 27(31%) use discovery tool and provides the name of different software, i.e. EDS, OCLC Web-scale Discovery, Summon, Koha, Google search, etc. and 5(5.75%) not answer of those questions. 24(27.59%) professionals know that the current discovery tool is open source discovery tool and 45(51.72) not fill that questions along with 18(20.69%) use commercial software in the library. We found in this survey, very less number of library professional know about the discovery tool, federated search, next-generation catalog and their features. Now it is time to change the scenario of the library using high-level technology for searching the data. We can say every library user, and staff will save the time of the searching process. In many old traditional OPAC search the books and separate search the IR and separate search query on individual databases. No one can provide a single search platform for library users. Only 16(18.4%) library professionals get information about discovery tool through the internet, vendor, articles, and friends and during workshop interaction. Rest 71(81.6%) professional not aware of discovery tool information. Only 23(26.5%) professionals suggest the current discovery tool is user-friendly and another suggest not the same.
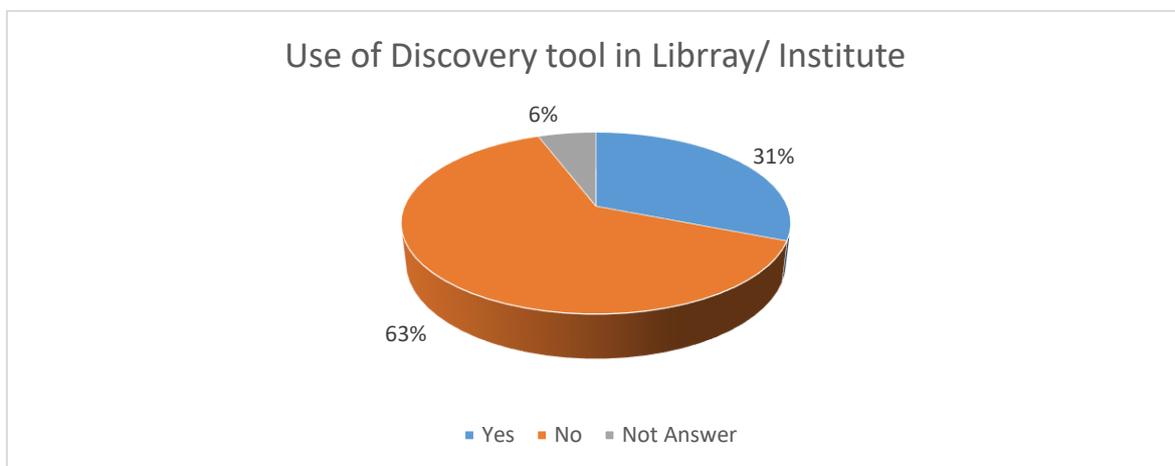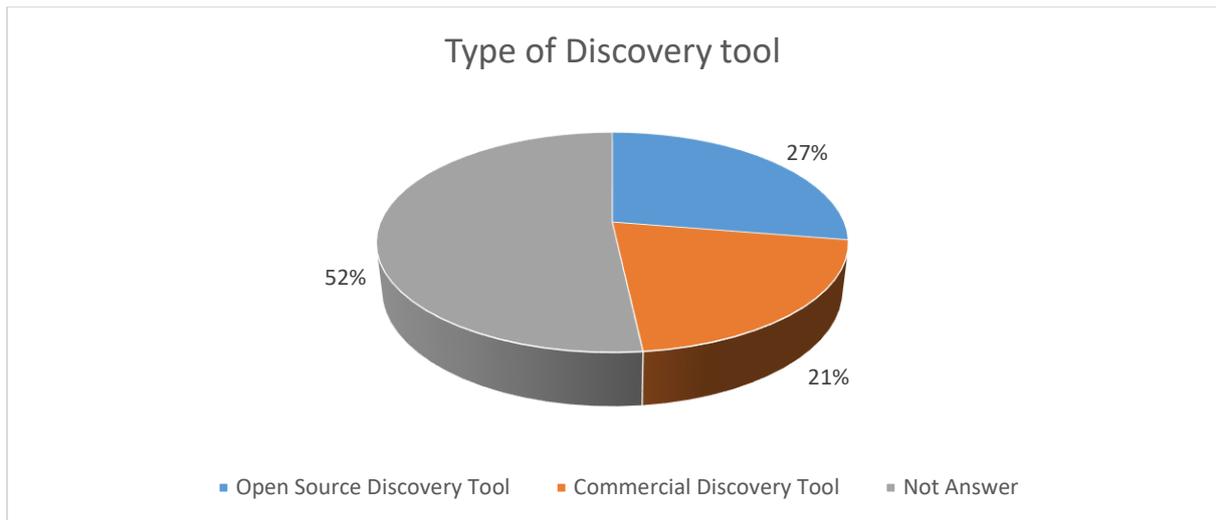

Figure 4. Use of Discovery

Figure 5. Type of Discovery Tool

We found the awareness of library professional related to discovery tool is to no far because Summon is commercial discovery tool and only 25 (29%) library professionals know, 8(9%) Summon integrated library software, 6(7%) Summon is digital library software, 12(14%) Summon open source software and 36(41%) not know about what is Summon.
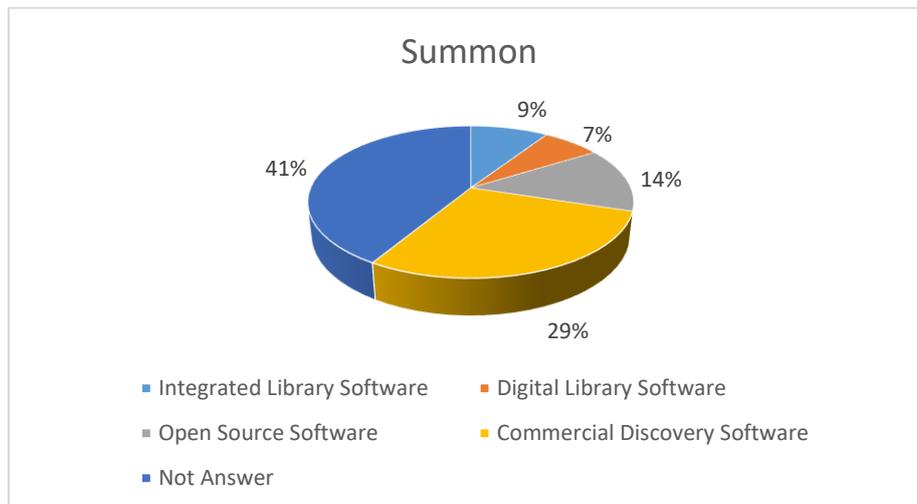

Figure 6. Summon

47 (54%) professionals know vufind and suggest vufind is open source software rest of professionals not know about vufind. We can say that after this survey, much difficulties face during data collect and analysis time. Some professionals said that Google is a discovery tool. We also support that statement, but google integrates all the available information in a single search platform. They can index different type of data and provide a result on a single page.
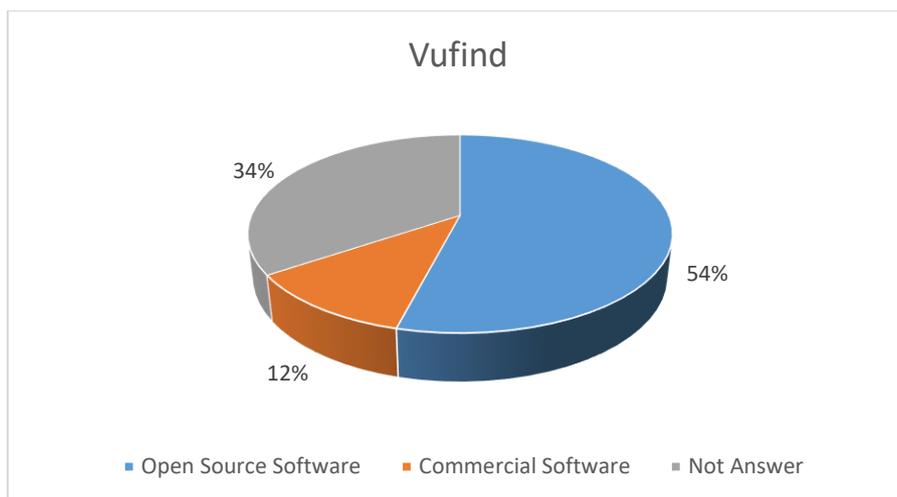
Figure 7. VuFind

A very few only 11(12.64%) respondent suggest this survey. Some suggestion was given below for reference purpose:

- Government /Expert Institutes should help other libraries to implement a discovery tool in library services.
- Create a blog for everyone.
- Discovery Tool is useful. It is cost effective.
- With the help of discovery tools, it is easy to search, and it is user-friendly
- Nowadays these discovery tools are widely used, and it was helpful both the students as well as researcher

7. **Conclusions, Suggestions and Recommendations**

After this study, we can say the more need to improve the library professional's skill related to discovery tool, federated search tool, next-generation catalog and web-scale discovery. Many professional not know about the basic concepts of the discovery tool and facet searching. In the study, more than 50% library professional does not know all the things related to the discovery tool and federated search. The main concern to learn about the new technology of the library science filed as used and implemented in the libraries. Then they will able to provide a better service for users without any interruption.

The library profession main motto is the service provider for users like we can say "Service Provider". So the library professionals learn a more new technology every time and try to implement in their working areas or libraries. Because nowadays every day new technology developed in the ICT field and it may be helpful for the library profession. Google also used the fundamental laws and techniques of library and information science. They provide a single search box for searching purpose and retrieve all the data in a single search box with multiple filters. So we can filter data as per requirement. Same think to follow in the library for a users search query.

References

Breeding, M. (2015). *The Future of Library Resource Discovery*. Retrieved from
https://groups.niso.org/apps/group_public/download.php/14487/future_library_resource_discovery.pdf

Chand, P. (2012). Web Scale Discovery Tools. Retrieved from
http://ir.inflibnet.ac.in:8080/ir/bitstream/1944/1665/1/2.pdf

Hassan, A. (2015). Evaluating federated search tools : usability and retrievability framework.
http://doi.org/10.1108/EL-12-2013-0211

Inger, S. (2013). Library technology in content discovery – evidence from a large-scale reader survey, *26*(July).

Kumar, V. (2018). Selecting an Appropriate Web-Scale Discovery Service: A Study of the Big 4's. *DESIDOC Journal of Library & Information Technology*, *38*(6), 396. http://doi.org/10.14429/djlit.38.6.12860

Labelle, P. R. (2007). Initiating the learning process : a model for federated searching and information literacy, *12*, 237–252. http://doi.org/10.1300/J136v12n03

Collins, M., & Rathemacher, A. (2009). Open Forum : The Future of Library Systems.

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Contributors

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