USE AND AWARENESS OF REFERENCE MANAGEMENT SOFTWARE'S AMONG THE RESEARCH SCHOLARS OF CENTRAL UNIVERSITIES IN NORTH INDIA: A SURVEY

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This paper discusses the availability and capabilities of reference management tools (RMS). It examines the use and awareness of reference management software among the Central Universities of North India research scholars. Academicians and scholars use citation tracking tools to track their references and collaborate with other researchers globally. Academicians and scholars may use reference management software to establish precisely and structured referencing of their study. Several famous reference management software programmes, such as Aigaion, Mendeley, Jabref, Zotero, and others, are currently available for free on the Internet. This software's specialized features are precious in facilitating successful reference management. For this study, the researcher employed an online questionnaire to gather data from the Central Universities of North India. The study's findings reveal that all respondents are familiar with reference management software, with Mendeley and Zotero being the most popular RMS among respondents. The researchers also describe the Seventeen RMSs in this study, which will aid others in selecting RMSs for personalized use. At the end of the study suggest that there are need to organized a training programme for proper utilization of RMSs tools.

KEY WORDS: Reference Management Software (RMS), Citation Management, Bibliographical Management tool, Mendeley, Zotero, Jabref, Central Universities, North India.

INTRODUCTION

The scholarly communication lifecycle in the twenty-first century is complex and evolving as the ICT world progresses. These advances make it possible to create, store, disseminate, view, and use scholarly outputs of all sorts in new ways. The processing of literary production by an organization or a person, such as research data, working papers, published works, theses, studies, and so on, increases scholarly contact. Today, RMS plays a crucial role in transforming the academic network architecture and increasing the researchers' potential to improve their studies.

Since the 1980s, reference management software has been viewed as a valuable method for scholars. To create citations and scholarly correspondence, many free and commercial referencing resources are now available. Specific entity data fields in a reference are discretely identified and stored by reference management tools, allowing various formatting rules to be added to individual elements in accordance with reference types.
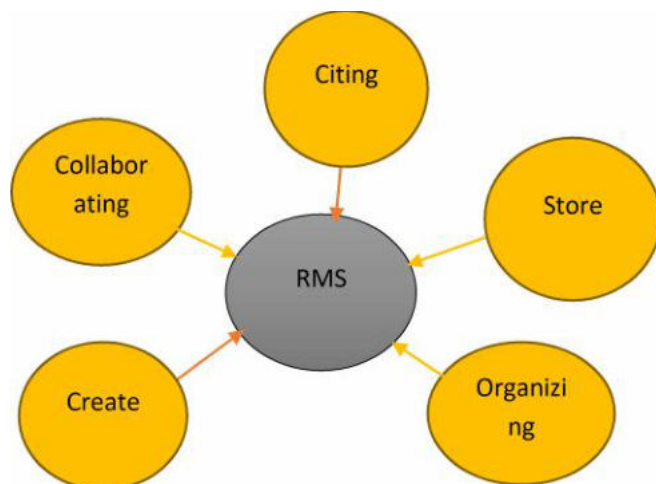

Figure 1: Work lifecycle at Reference Management Software

REFERENCE MANAGEMENT TOOLS

EndNote, RefWorks, CiteULike, Mendeley, and Zotero are some of the more popular options. Like CiteULike, some of these packages have Web2.0 features for information exchange and can only be used online. Others with a broader reach provide an offline version that can be used on personal computers (PCs). While some of these programmes are professional and must be purchased, others like EndNote and CiteUlike, are open-source and can be used for free.

WHAT WILL REFERENCE MANAGEMENT TOOLS SUPPORT YOU WITH?

The following things write down: -

➢ Arrange and filter papers

➢ Attach pdf files

➢ Read and annotate attached pdf files

➢ Sync RMS and browse articles from anywhere by signing into your RM online account

➢ Communicate with others

➢ Cite when writing articles

➢ Insert reference manually

➢ Import and export citation

➢ Quickly translate references into other referencing styles.

REVIEW OF LITERATURE

Adeyemi, Sulaiman and Akanbi (2020) this research, titled "Awareness and Use of Reference Management Tools: Perspectives of Faculty Members at the University of Ilorin, Nigeria," looked at how faculty members at the University of Ilorin felt about the software. The researcher used a descriptive approach in this study and gathered information via a web-based questionnaire. Rather than mailing a questionnaire to the researcher's respondents, a web-based questionnaire was created utilizing Google Form. Wahyuningsih (2020) investigated Bidikmisi students' views regarding the Indonesian State Islamic Institute's Reference Management programme. To achieve the study's goals, the researcher used observation and interview techniques. Participants in the study were knowledgeable of and used Reference Management tools. Reference Management

Software (RMS) is helpful, according to the respondents. Hendal (2019) investigated Kuwait University faculty members' viewpoints on Reference Management Software (RMS). Endnote Reference Management programme was found to be more usable RMS by participants in a survey. In this study, the researcher also mentioned several other RMS. The thesis also discovered the need for a training curriculum on how to use RMS properly. It was also recommended that a researcher be hired.

Nilashi et al. (2016) investigated the features of Reference Management Software chosen were studied. RefWorks, Mendeley, Zotero, and Endnote were selected as the four RMS for the researcher's analysis. The study discovered that ease of use, citation, collaboration, data format, import, and technical specification features of Reference Management software is more common among consumers. Similarly, Holland (2016) addressed both free and premium Reference Management Software's capabilities and functionality. According to a report, endnote, Reference Manager, Papers2, and RefWorks are paying Reference Management Software, while Mendeley and Zotero are free with certain limitations. The functionality of Reference Management Software (RMS) was also explored in-depth in the report.

Similarly, Hensley (2011) compared and contrasted the advantages and disadvantages of four reference management software programmers: RefWorks, Endnote, Zotero, and Mendeley. The research paved the way for them to choose the best Reference Management tools for their specific needs. Butros and Taylor (2011)

compared and contrasted the commercial and free Reference Management tools available. The benefits and drawbacks of the functionality of Reference Management tools were also addressed in the report. This analysis's primary goal was to guide students and assist them in selecting the best Reference Management tools for their needs.

This paper discusses the past studies which will indicate the research gap. For instance, presently, there is a lack of research on the reference management software on central universities in North India and its long-term effects. Moreover, the ICT application in the university libraries, syllabuses and adaptations of these applications by the student's community motives to carried on the studies on the management aspects of Reference management software's.

REFERENCE MANAGEMENT SOFTWARE (RMS)

Once upon a time, there were just a few choices for reference management applications, but with the explosion of RMS options over the last decade, it could be not easy to choose one. This research would aid in the selection of the best RMS for consumers. Some areas: -

➢ Aigaion (On January 10, 2018, Aigaion, a reference management software, was launched. Aigaion is written in PHP/My SQL and distributed under the GNU General Public License. It supports several citation forms, including APA, Chicago, MLA, IEEE, among several others. Users of Aigaion can export references in the RIS and Bib Text formats.

➢ Bibus: - (biblio.st.net) Bibus is a python-based reference management framework that is free to download. It is compatible with Microsoft Windows 32-bit versions.

➢ Bib Tex: Bib Tex was first published in March 1985, 35 years ago. Oren Patashnik and Leslie Lamport came up with the idea for Bib Tex. Users can download tug.org/bibtex/www.bibtex.org, which is available in English.

➢ Bookends: Bookends is a paid reference manager that runs on the Mac OS. Sonny software created it, and Jon Ashwell keeps it up to date. (Sonny software.com) is a user-friendly reference management platform that offers a range of helpful tools to help users function more effectively, such as scanning documents by author name, title, keywords, and other parameters, as well as editing capability. Users can also import their bibliographies from different reference management systems such as Zotero, Mendeley, Endnote, and others into Bookends.

➢ Citavi - Citavi.com is a free reference management service with a few restrictions. Swiss Academic Software GmbH developed the software available in many languages, including English, French, German, Spanish, Italian, and Polish. Users can store documents in the Citavi cloud and use the chat function with Citavi RMS. Citavi RMS provides its users with helpful tools, including a recycling bin, a browser for citations and pdf annotations, full-text indexing of attachments, and much more. Work on a 64-bit Windows version. Citavi supports over 9000 citation types.

➢ Cite u like is a reference management software that can be used to organize and store review documents. It is available in both commercial and free versions. Cite U Like is a web-based application that runs exclusively on the Internet. Any computer with an internet connection can use it. Users of Cite u want will collaborate and share information. Users will import Google Scholar references into cite u, a reference management software.

➢ Endnote reference management software users can interact with a web-based component, enabling them to function online and offline. Endnote is a proprietary software application created by Clarivate and available at endnote.com. For private groups, collaboration capabilities are also available.

➢ F1000 Workspace: F1000 Workspace is a paid reference management programme that comes with a 30-day free trial. On the F1000.com/work page, users can conveniently sign in to the F1000 Workspace. Users can import references in the following formats: RIS, BIB, and XML. Many other functions, such as highlights, making comments, and so on, are included in the F1000 Workspace. Its users had access to over 7000 different citation forms.

➢ Papers: A paper is a commercial reference management service that provides potential customers with a 30-day free trial. It's a desktop-based system. Users of Papers may use tools like highlights, strikethrough, and tabs to move between various documents. The readers of papers have access to over 9000 different citation forms. This RMS listed critical records with supplementary documentation, citations, and the full text is

accessible online. Users with Papers will also work with up to 30 other users and have unrestricted cloud computing space. Users can download it for free from www.papersapp.com.

➢ RefWorks reference management software is a web-based commercial product offered by ProQuest. It was founded in the year 2001. In 2005, Refworks launched the re-share module, enabling users to make all of their RefWorks databases public.

➢ The reference management programme Ref Me supports over 7500 different reference types. On refme.com, you can find it in English. Ref Me was the one who came up with the idea. It's a reference management programme that's yours for free. Act for the operating systems Windows, Mac OS, and Linux. It also allowed users to collaborate and share information. Ref Me was named one of the fastest-growing startups by UK Trade and Investment in 2014 (UKTI).

➢ Mendeley is a programme that allows you to keep track of what you're reading Mendeley.com is a free reference management service that also offers a paid edition to its customers. Mendeley is the most widely used reference management platform by academics. It was created by Elsevier in August 2008 and is only available in English. Its users have several valuable features, including automatically creating bibliographies, collaborating, importing posts, and internet access. Also, Mendeley RMS helps you create a private or public community, organize and scan papers, and highlight them. Mendeley is compatible with Windows, Linux, and Mac operating systems.

➢ JabRef - Jab Ref.org is a free and open-source website. Jab Ref was first published in 2003. JabRef is a desktop-based tool that follows the standard computing paradigm, with both proprietary and free alternatives. Users of the Jab Ref programme could select from 15 different import comparison formats. It also contains various helpful tools, such as advanced search and filter options, article organization, editing, etc. Jab ref is a user-friendly programme that allows users to add new entries and manually retrieve metadata from PDF files. Jabref users can also use online science databases such as Google Scholar, IEEE Xplore, Springer, Pubmed, etc.

➢ Scientific reference: - Sci-ref is a subscription tool that costs 38.90 dollars for a single person. Sci-ref gave a free 60-day trial. Sci-ref.com makes it easy for users to download. Work on a computer with the Windows operating system. Sci-ref users had access to various features, including many classes, simple share, import, PDF reader, and more. Its users can access bibliography records from Science Direct, Elsevier, Cambridge.org, and other sources. Users of Sci-ref will explicitly integrate with MS Word and insert bibliography into documents with a single click.

➢ Qiqqa: In 2010, Qiqqa was first published. www. Qiqqa.com is a freemium reference management programme available in English. A Cambridge University Ph.D. student created it. Users can quickly download the software and register for a free account. It is compatible with both the Windows and Android operating systems.

➢ Wizfolio: (http://www.wizfolio.com) is an online reference management platform founded by Wiz Patent Pte Ltd in January 2011 and is available in English, Japanese, and Korean.

➢ Zotero (Zotero): - In October of 2006, the Zotero reference management programme was released. It was founded by George Mason University's Center for History and Digital Media. Written in JavaScript, it runs on Windows, Linux, and Mac computers. Zotero gave away 300 MB of data for free before charging $20 a year.

OBJECTIVES OF THE STUDY

The main objectives of the study are:

1. To check the awareness of Reference Management Software among research scholars of Library and Information Science of Central Universities in North India.

2. To identify the various Reference Management Software used by the research scholars.

3. To explore the purposes of using Reference Management Software of Central Universities in North India.

4. To know the features preferred by the Library and Information Science research scholars in Reference Management Software.

5. To know the overall satisfaction level regarding Reference Management Software among research scholars of central universities in North India.

HYPOTHESES

H1: Library and Information Science Research Scholars are well aware of Reference Management Software of Central University in North India.

SCOPE AND LIMITATION OF THE STUDY

The study's scope was limited to the central universities of North India having the department of Library and Information Science and research scholars of the universities since, at present, there are 9 central universities in North India whereas only 7 Central universities are offered Ph.D. course. Hemwati Nandan Bahuguna Garhwal University and Jamia Millia Islamia University are excluded because they are offered only UG and PG programme.

Details are as given as below: -

Sl. No.	Name of the Universities	City	State
1	Aligarh Muslim University (AMU)	Aligarh	Uttar Pradesh
2	Assam University (AU)	Silchar	Assam
3	Babasaheb Bhimrao Ambedkar University (BBAU)	Lucknow	Uttar Pradesh
4	Banaras Hindu University (BHU)	Varanasi	Uttar Pradesh
5	Central University of Himachal Pradesh (CUHP)	Dharamshala	Himachal Pradesh
6	Central University of Haryana (CUH)	Mahendragarh	Haryana
7	University of Delhi (DU)	Delhi	Delhi

METHODOLOGY OF THE STUDY

In this study, the researcher employed the survey technique, with an online questionnaire serving as a tool for achieving the study's goals. The data was analyzed using MS Excel for the descriptive analysis. The population of the study was 188 research scholars in the library and information science department. The researcher could received149 research scholars only for data analysis.

RESULTS

Table 1: Total Number of Response Received

Sl. No.	Name of the Universities	Total Number of Research Scholars	Total Response Received
1	Aligarh Muslim University (AMU)	33	28
2	Assam University (AU)	13	11
3	Babasaheb Bhimrao Ambedkar University (BBAU)	37	37
4	Banaras Hindu University (BHU)	44	40
5	Central University of Himachal Pradesh	10	10
6	Central University of Haryana	03	03
7	University of Delhi (DU)	48	20
Total		**188**	**149**

The table shows that the department of Library and Information Science at central universities in North India has 188 research scientists enrolled in their Ph.D. programmes. Out of 188 responses, the researcher only obtained 149 from North Indian research scholars (79.26 percent). The University of Delhi's library and information science department has 48 research scholars enrolled in their Ph.D. programmes, according to the table.

Table 2: Awareness of RMS

Sl. No.	Options	Responses	Percentage
1	YES	137	91.95
2	NO	12	8.05
Total		**149**	**100**

Table 2 showed that 91 percentage of responded are aware about Reference Management Software's in Central universities in North India.

Hypotheses Testing

H1: According to table 2, Library and Information Science Research Scholars are well aware of Reference Management Software of Central Universities of North India. So, H1 is an Alternative hypothesis.

Table 3: Gender-wise

S.No.	Gender	Respondents	Percentage
1	Male	98	66
2	Female	51	34
Total		**149**	**100**

Table 3 indicates that male responded are more than female responded in the central universities in North India.

Table 4: Most preferred RMSs Tools

Sl. No.	Name of RMSs	Respondents
1	EndNote	24
2	Mendeley	63
3	Zotero	62
Total		**149**

Table 4 showed that Mendeley and Zotero Reference management software are preferred by research researchers at central universities in North India for organizing their work and bibliographies. Mendeley and Zotero are more popular compare to other Reference management tools because of its freely available and easy to use.

Table 5: Purpose of using Reference management software

Sl. No.	Purposes	Respondents
1	For the Research	90
2	Literature Review	129
3	Maintain Bibliography	133
4	Creating own library	80

Researchers are free to respond by selecting many options based on their preferences while answering this question. In North Indian universities, research researchers primarily use reference management software to maintain their bibliographies and conduct literature reviews.

The most popular aspects of reference management software are examined in Table 6 by research academics from central Indian universities. The most popular features, according

Table 6: Features preferred in Reference Management Software

Sl. No.	Features	Respondents
1	Importing Reference from database	88
2	Creating a formatted bibliography	107
3	Organizing references or documents for easy retrieval and management	79
4	Collaborating on documents and Reference list with others	43
5	Highlighting documents	89
6	Plugin for Microsoft word	68
7	Editing reference in the needed citation style	136
8	Automatic file renames	139

(Respondent selected more than one options)

to the table, include automatic file renaming, editing references to match the required citation style, creating a formatted bibliography, etc.

Figure 2: Satisfaction level of the respondents

Figure 2 depicts that all respondents are satisfied with the capabilities provided by the Reference Management programme**.**

CONCLUSION, SUGGESTIONS AND DISCUSSION

There are currently so many referencing management software options available, some of them are free and some of them are paid. RMS

has grown to include newer features such as exporting, importing, collecting references, file upload, database scan, and producing reference output in common referencing types (APA Style, MLA Style, Chicago Manual, IEEE, and many others). Users can switch from one referencing style to another depending on their needs. RMS is valuable for scholars, librarians, and professors. In this study, researchers examine the use and awareness of reference management software (RMS) among the researcher scholars of the Central Universities of North India. The study's findings reveal that researchers are aware of reference management software (RMS) benefits. In this study, the researchers also explain the 17 RMSs, which will help others choose RMSs for personal usage. The study suggested that need to training programme for the users of RMS. The finding of the study also suggested that Librarian and faculty members of the department must be organized regularly a workshop or webinar for proper utilization of Reference Management software's. The study support (Hendal, 2019) study suggestion for need to training programme. The present study also supports the finding of the (Wahyuningsih, 2020), (Hensley, 2011), (Butros and Taylor, 2011) study. The all study supports that RMSs tool are helpful for the researchers for their study.

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