

Zotero and Mendeley: Reference Management Software for Citation

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Introduction:

Management of references or citations used in the research are time consuming and monotonous as well huge task while report writing. Earlier researcher are manually performed this task note down the bibliographical details of the sources he consult for the work on 5x7 inch card and arrange alphabetically while compilation of the bibliography at the end of the research writing. The styles of bibliography if, changed while publication of the article in journal by the Publisher or book publisher, it will again take time to correct the entire bibliography accordingly the style of the publishers' desired style. The Information and Communication Technology (ICT) plays a very important role for management of citation work. Through ICT it's made easy and available on the tips of the finger of the researchers with help of computer, software and internet, to manage the references in various style like MLA, APA, IEEE, Chicago etc. having complex and difficult structure pattern. There are different software's are available in both commercial (EndNote, Reference Manager) and in open source mode (JabRef, Mendeley, Zotero) for the well-organized paperwork of references. This software's can be used on desktop for offline and online preparing reference list which can be accessed anywhere, anytime on internet with synchronization facility[1]. There are many software available which provide the solution of citation management task to scholars and authors to prepare Reference or citation for thesis or article, they are Ms Word, EndNote, Zotero, Mendely, ReadCube Paper, EasyBib.com, Article Galaxy Enterprise, Paperpile, Cite This for Me, Citavi, Reference Manager, RefWorks, citeforme.org, JabRef, Sorc'd, Biblioscape, Citationsy, figshare, Bookends, Citeulike, rebase, Sente, Bibsonomy, MyBib, Qiqqa, Wisdom.ai, Aigaion, BibBase, etc and so on.

What is Reference Management Software?

The research, including the work you produce for your academic programme, builds on previous research. It is important when producing academic work that you acknowledge the works on which it was built, to validate your ideas and arguments, so that the reader can find out more and see how your ideas were formed, and as courtesy to the authors of those works. You therefore need to acknowledge these works by including references to them. Failure to do so can result in plagiarism.[2], [3] To make or prepare citation or references in your own style or other you either work manually or take help of ICT to manage it, the Reference Management Tools (RM) mentioned above are make easy the task, which most tedious and time consuming for every researcher to prepare accuracy the Citations used in the work.

Reference management software also known as citation management software or bibliographical management software having very useful features helps researcher enables:

Collect references and Store them on desktop or web account. Organize references in folder, sub folder as per the topic, Formatting in different referencing style to create bibliography at the end of the report as a reference list of the sources used in the thesis or document, can attached or store full text PDF and links of the materials with reference, Snap shots of the website or from Social Media, Share references collection to other devices or persons and researcher can easily convert referencing style into suitable publication style as per the requirements of the publishers. [4].

Features of RM:

RM Tool having features which enhance the use of it like easy to use, user friendly, accurate and reliable result, save the time and effort of the users, almost free from human errors, Some of free of cost; Compatibility with MS word, Libre office and browsers; work on offline-online mode with Storage facility; having facility to creating custom and international reference styles ; data import-export facility in different format ; synchronize and access to other devices on internet; Easy to search, create, organize, save and share bibliographic information.

The Reference Management Software or Research Manager (RM) functions:

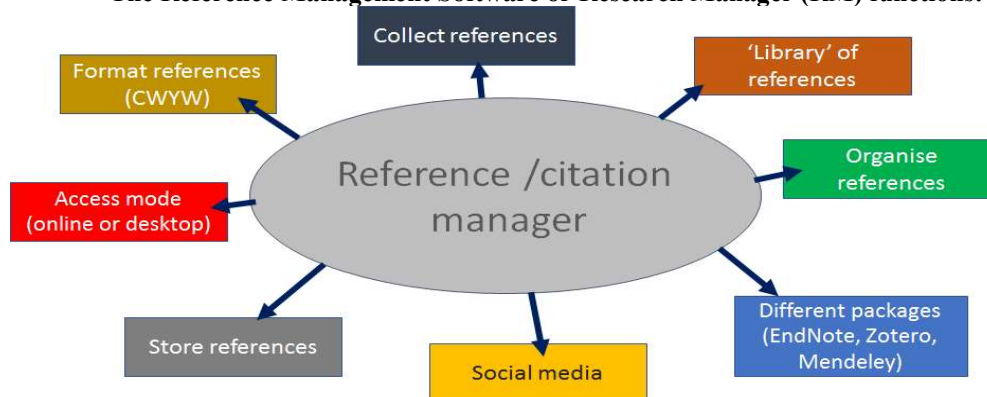


Figure 1 Reference / Citation Manager Functions

Source: https://libapps-eu.s3.amazonaws.com/accounts/142956/images/reference_mgrs_spider.png

Advantages of Reference Management Software (RMS):

Inserting References, Creating bibliographies, changing the reference style for resubmission or make correction in the text, Alphabetically or Numbering of the sources arrange, Fetch bibliographical details from Websites, Databases or other sources like Title, Author Name, publication, Volume no, Issue no, Year etc.

Limitations of Reference Management Software (RMS):

- Sometime RMS may not create the reference list as per your style in such a case researchers should always vigilance to check the reference list or bibliography created by the RMS. Each and every sources used in your work which is according to your preferred citation style or as per the instruction given by the Guide or the publisher must be observed,
- There are more than 9000+ Reference style available; researcher need to known with one style to choose for the thesis or paper writing like American Psychological Association (APA), Chicago Manual of Style, IEEE, Modern Language Association (MLA) with its different edition and features.
- Researcher has to study and refer the Style Manuals choose for the work, with its updates.
- Some RMS may not give editing facility, and some having the facility to edit the bibliography.
- RMS fetch the data from the sources may have typological mistake need to check and make proof reading of the bibliographical data with grammatical mistake of the sources which cited.

- RMS while fetching the data from sources may not recognize the type of sources like Thesis, book, conference paper etc
- Some time the data coming from the source are in not in the proper format need correction and editing. [2]

Zotero – Reference Management Software:

Zotero is an Open Source Software available free of cost, Its Desktop version has unlimited data storage capacity while online version provides 300Mb free storage space, more space researcher has to purchase the plan. Zotero helps researcher to collect, organize, and analyze research data from electronic resources, online resources like WebPages, html file, pdf, websites, takes its snapshots and prepared bibliographical data from it like author, title and publication fields. Researcher cans also export-import the data to others in various citation styles. Zotero provides facility to give search facility to entire collection also provides notes, tag, and other information in the particular documents or resources. Zotero instantly creates references and bibliographies for any text editor, and directly inside Word, LibreOffice, and Google Docs. With support for over 9000 citation styles, it formats a work to match any style guide or publication instantly.[5]

Zotero is a project of the Corporation for Digital Scholarship, a nonprofit organization dedicated to the development of software and services for researchers and cultural heritage institutions. It was created at the Roy Rosenzweig Center for History and New Media at George Mason University with initial funding from the Andrew W. Mellon Foundation, the United States Institute of Museum and Library Services, and the Alfred P. Sloan Foundation on 5th October 2006 developed on JavaScript language for coding its support windows, mac, linux operation system. [6]

Zotero can be downloaded from the site <https://www.zotero.org/>

At present Version 6.0.19 (December 27, 2022) is available for Desktop software of Mac, Windows, Linux, and iOS operation systems.

Zotero Connector for Google Chrome and other browser can be download from <https://www.zotero.org/download/> [7]

Zotero various Plugins like Word Processor and Writing Integration for Ms Word and Openoffice etc... also available on <https://www.zotero.org/support/plugins> [8]

Zotero for Mobile software available on <https://www.zotero.org/support/mobile> [9]

Mendeley – Reference Management Software:

The Company Mendely was developed in November 2007 by three PhD students in Germany on the name of biologist Gregor Mendeley and chemist Dmitri Mendelev, in the year 2008 its 1st version was introduced by various businessman, technocrats and academicians from University of Cambridge and John Hopkins. It was supported Open access movement. In 2013, Elsevier acquired Mendeley as an effective strategy to secure its business which was threatened by the mendely. [10] Now, Mendeley is Proprietary reference manager software prepared by Elsevier Scientific Publishing Company, offers basic free facility up to 2 GB data can be store on cloud with Microsoft account login. They have various plans also available more cloud storage and more users. It is also an academic social network that can help you organize your research, collaborate with others online, and discover the latest research. It supports the automatic generation of bibliographies, collaborates easily with other researchers online, Easy import papers from other research software, find relevant papers based reading, and access papers from anywhere online. [11]; It helps to organize one's research, collaborate with others online, and discover the latest research-based on our searching keywords, automatic online synchronizations, group discussion, importing and exporting of the bibliographic data. [12]

Mendeley Reference Manager –Create Account Online -

https://www.mendeley.com/?interaction_required=true

The Comparison of Zotero and Mendely RMS for its facilities and factions etc.

Particulars	Zotero	Mendele
Costs	Free	Free (basic edition)
Access	Plug-in for browser or stand-alone version for desktop available	Desktop Version (After September 2022 stops the Service for new users)
Shareable Data	Reference and PDF library are shareable	Reference Library (Limited PDF sharing)
Import Citation Data	YES	YES
Work Offline	YES	YES
Detect Duplicate Entries	YES	YES
Journal Abbreviation Automated	Yes, any journal in MEDLINE	Yes, by citation style
Search & Replace	YES	NO
Data Visualization	YES	NO
RSS Feeds	YES	NO
Attach PDF	YES	YES
Annotate PDFs	NO	YES
Storage	300 MB online; Unlimited on Desktop	2GB with Microsoft account required
Main access (web/cloud or desktop/laptop)	Desktop/laptop and web/cloud. Can sync with multiple computers.	Desktop/laptop and web/cloud. Can sync with multiple computers.
Mobile version (phone, tablet)	Yes (iOS or 3rd party options)	No (Stop the Service from 2021)
Registration/account required?	Only for cloud sync and collaborator sharing. Can use locally without an account.	YES
Support options	DIY support only, via user forums	Email, phone, or chat
Best features	Free (up to 300 MB online storage); open source; user-friendly interface; easy to add references; PDF annotation within the program; ability to work offline; connects with MS Word, Google Docs, and LibreOffice.	Free (up to 2GB of online storage); user-friendly interface; easy to add references; PDF annotation within the program; ability to work offline; connects with MS Word.
Possible drawbacks	Limited free cloud-based storage space; works best with one primary workstation.	Does not connect with Google Docs; limited storage space when sharing with groups; difficulty importing accurate metadata for some source types.

Particulars	Zotero	Mendeley
Storage (references and file attachments)	Unlimited on local computer, 300MB in cloud (can pay to upgrade)	Unlimited on local computer, 2GB in cloud (can pay to upgrade)
Reference import methods	Manual RIS file PDF drag & drop Identifier (e.g., DOI, ISBN)	Manual RIS file Direct from some Elsevier databases PDF drag & drop Identifier (e.g., DOI)
Browser import	Zotero Connector Chrome Firefox Safari (bundled with Zotero 6 download) Edge	Mendeley Web Importer Chrome Firefox Edge
Collaboration tools	Private or public groups for sharing references. Collaborators must have Zotero accounts.	Private groups for sharing ideas and references.
Number of citation styles	9000+ pre-defined	9000+ pre-defined
Custom style editing	YES	YES

Table : 1 [14],[15]

Conclusion:

Reference Management Software helps to create Reference list, Citation, Footnotes, Endnotes or bibliographies as per your desire style and format. Giving Citation is a best practice to acknowledging someone's ideas or works and researcher cannot catch in plagiarism. Citation means taking proper justification and supports of others experiments, theories, models, frameworks or facts that are used to create an academic work which reader can get the proper sources used in the research. If, researcher not gives proper citation to others work and shows that it's his or her own work is come under the preview of the plagiarism. To avoid plagiarism researcher or authors has to provide proper citation in their work; the Reference Management Software helps to manage citation or reference in their academic or scientific research. Researcher has to know about RMS's various features, functions, facilities, and backup and restoration system to work smoothly. To override on the circumstances which may spoil the research work like corruption in Operating system or software, crash of hardware, researcher has to make a copy of its work or make a backup on external hard disc, pen drive. During the backup avoid making copy of the work on the same system which may not reversible or recoverable, it may lose entire data. Every researcher has to familiar with Zotero and Mendeley Reference Management software and tools which helps them to manage the different types of literature, it can collect, organize, search, share to others and make the reference list in various citation styles while publishing as a book or article from its final research output as per the publisher's requirements.

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