

Reference Management TOOLS: A special reference to Endnote in R & D Libraries

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ABSTRACT

Reference management tools can be used not only for students and academics or teachers, but start-ups, SMEs, marketers, writers, bid-writers, publishers and research agencies. Basically, anyone who is doing research by reading a lot of content on a particular project or has to keep track of a number of citations and sources and needs to keep all the information and sources in one place. The study discusses about the basics of Reference Management Tools followed by definitions, core functions of RMT's, comparison with other reference management tools like Endnote, Mendeley and Zotero, and finally we discussed about the use of Endnote in the R & D libraries.

Keywords: Reference Management Tools, Functions, Popular Tools, Comparison, Mendeley, Zotero, R & D Libraries.

1. Background

In today's scientific research and production managing references has always been a difficult task in reporting research results and producing academic writings. Various software programs have been adopted by, and specifically developed for, authors of systematic reviews. These tools range from statistical software to comprehensive systematic reviews programs. These software's are first developed in the 1980s, these programs were initially marketed to researchers as a means of creating online indexes of personal print-article collections. Reference management software's also known as bibliographic software, citation management software, or personal Bibliographic file managers, these are used for storage and retrieval of bibliographic records.

Numerous reference management programs are currently available. Although all programs facilitate the capture, organization, and elimination of duplicate records from electronic database searching, they vary with respect to cost, overall functionality, and networking capabilities. Products such as EndNote, Papers, and RefWorks are licensed or sold outright, while others (e.g.: Mendeley and Zotero), are available at little or no cost to the user. Some of the reference tools are run on single station computers (e.g. EndNote and Reference Manager and some of them are web based (e.g. Mendeley and Zotero) Single station software usage is generally not affected by website time-lags, down times, or record limits. The benefits of these web-based programs include the ability to store reference databases on secure servers, and access databases from multiple computers or other electronic devices. Web-based programs also provide users with enhanced networking functions that readily support the sharing of records among researchers. The identification, collection, and organization of relevant literature is instrumental to the successful completion of systematic reviews, for this a "rigorous data management plan" is essential.

According to Telstar's definition, RMS Reference Management Software have two main functions:

1. Building a database of citations to organize the documents useful for one's research;
2. Formatting bibliographies and citations when writing papers through plug-ins or add-ons for Word processing software.

Today's packages offer advanced features which vary from software to software, from the PDF storage and organization to including ways for annotation and sharing of data. The most prominent feature relates to the very nature of a "global information infrastructure" (Borgman) as a place of continuous and seamless interaction and integration: citations are shared, discussed, commented, suggested within members of the scientific community.

2. Literature review

There is currently no research evidence available to be conducted in this topic in Iran. However, in other parts of the world, research projects relating to RMS packages have mostly been carried out in the field of Library and Information Science, with the aim of examining the role of libraries and librarians in teaching others how to use these packages.

Diane L Lorenzetti* and William A Ghali (2013) in their study reported that of the 78 researchers who responded to their survey, 79.5% reported that they had used a reference management software package to prepare their review. Of these, 4.8% reported this usage in their published studies. EndNote, Reference Manager, and RefWorks were the programs of choice for more than 98% of authors who used this software. They also found that the increased use of reference management software helps to enhance the transparency, reproducibility and quality of systematic reviews.

Sujit Kumar Basak(2015) compared the reference management software of JabRef, Zotero, and EndNote, and the results of this paper were concluded based on the experiment of these three softwares. resulting information that JabRef can import more fields as compared to the Zotero and EndNote.

Huffman (2014) considered citation managers as gateways to academic integrity and argues that librarians would help students comply with the principles of academic integrity if they promote the benefits, for example, in terms of time and effort saved, as opposed to the moral imperatives. These functions of RMS packages, however, seem to not satisfy their users (Antonijevi and Cahoy, 2014).

Fenner et al. (2014) referred to the integration of unique author identifiers into reference management tools to facilitate the discovery of relevant literature and the automatic updating of publication lists. Moreover, the application of RMS has gone beyond computers in the last couple of years.

Glassman and Sorensen (2012) provided an overview of mobile RMS and described available citation management apps and mobile-friendly Web sites. They describe mobile citation managers as a good way for librarians to reach out to end users.

Kern and Hensley (2011) named RefWorks, Endnote and Zotero as the most popular citation managers promoted and supported by academic library Web sites. They made an overview of benefits and drawbacks associated with each of these packages from the perspective of students and librarians and provided some suggestions to librarians as to the best instructional practices for supporting citation management tools.

Childress, (2011) based on their experiences in administering to the needs of the academic community in managing their citations, a set of standards and best practices for meeting citation management queries in libraries, has been provided by librarians.

Fourie (2011) referred to the role of LIS professionals in promoting the potential of personal information and reference management to offer more than easy citation of information sources and the creation of bibliographies, toward quality orientated, collaborative productivity and creativity.

Ovadia, (2011) opined that the importance for researchers of using RMS applications, especially in getting access to more electronic resources, has been stressed throughout the literature.

Harrison et al., (2005) opined that the delivery of RMS training programs has been considered as an opportunity for libraries to improve communication with academic staff and increase awareness of library resources on the part of users.

In addition to the above, some papers have investigated the familiarity of academics with RMS packages. Yildirim and Yilmaz (2012) have used a survey method to investigate the perceptions of Istanbul University's Forestry school's faculty members regarding RMS packages. Results revealed that faculty members are interested in using these sorts of packages, if available. Price and ease-of-use are considered to be important criteria for faculty members when choosing a software package. Researchers have also investigated the topic from the perspectives of other involved groups, such as students, within the academic environment. Salem and Fehrmann (2013) examined the preferences and practices of undergraduate students in relation to managing citations. Researchers confirmed the students' lack of awareness of the tools and their potential sensitivity to possible negative reactions from their faculties. They stressed the need for collaboration between librarians and teaching faculties as a way of promoting the value of RMS and of offering training in the use of such tools.

3. Core functions of Reference Management Tools

3.1. Searching and Retrieving References from Online Databases:

One can easily search various online databases such as PubMed, the Library of Congress, web of science and various university catalogs using these programs. Most of the tools help researchers to import literature from a variety of online sources. Many offer in-app searching of external databases such as Google Scholar, as well as web-browser plugins that grab reference data (and sometimes, associated PDFs) from journal websites and other pages.

This could minimize the effort of going to the websites of these Internet databases and learning their search mechanisms and syntax. Furthermore, these programs allow you to automatically retrieve selected references in your digital library without the need for manually entering references by typing. Automatic entry of references provides the following benefits:

- Typing errors, such as in authors' names or titles, are eliminated.
- Correct abbreviations of journal names are entered in the library.
- In addition to the essential reference information such as title, author(s) names, journal, and date of publication, extra information about a given reference is downloaded into the library, such as the abstract and the URL.

3.2. Creating Bibliographies:

One of the best-known features of reference-management software is the ability to insert in-text references in a research paper and to create bibliographies in any format. EndNote, a widely used commercial package, has offered this feature for decades ago.

You can easily insert in-text citations into the body of the manuscript and automatically create an appropriately formatted bibliography using a reference management software program. The useful functions of these programs for creating bibliographies include: References are frequently added, edited, or deleted during the iterative process of writing. These programs greatly facilitate the process of automatically changing citation numbers in the body of the manuscript and ensuring that the in-text citations correspond to the bibliography

Many tools interface with common word-processing software (usually Microsoft Word, but sometimes Open Office and related freeware suites as well) so that a user typing up a research article need only select the papers that they want to mention and click a button to have codes inserted into the document to mark the in-text reference. Later, the user can create a bibliography and in-text citations according to several journal styles, picking his or her choice from the list.

3.3. Storing and Managing References:

By storing references in a digital library, these programs provide you functionality inconceivable in the analog world of paper index cards for example, they can search the library by multiple criteria such as author, title, journal, year, or keywords. Digital libraries can be stored in a computer eliminating the need for shelf space for index cards. They can also be backed up easily to avoid losing reference data. Some examples of the types of references that can be stored in a digital library includes articles, books, grants, theses and reports etc

3.4. Working with a Handheld Computer:

Digital libraries can be copied onto a handheld device, such as a Palm computer for portability and for sharing information

4. Most popular reference tools are:

The most popular reference tools have been listed below

Product	URL	Platform	Free?
colwiz	colwiz.com	Desktop/web/mobile	Yes
EndNote	endnote.com	Desktop/web/mobile	Yes, with some limited features
F1000Workspace	f1000.com/work/	Web	No
Mendeley	mendeley.com	Desktop/web/mobile	Yes, with some limited features
Papers	papersapp.com	Desktop/web/mobile	No
ReadCube	readcube.com	Desktop/web/mobile	Yes, with some limited features
RefME	refme.com	Web/mobile (only stores references)	Yes
Zotero	zotero.org	Desktop/web/mobile	Yes, with some limited features

5. About Endnote

EndNote is commercial bibliographic reference management software which can be site-licensed by institutions or by individuals and it was produced by Thomson Reuters and was first released in 1988. EndNote is a widely used by faculty, researchers, and the students collect, store, organize, manage their references, images, and PDFs, insert references in the

manuscripts, placing figures and tables in the word document or other documents. It provides users three utilities such as filters (records downloaded from other databases into the EndNote database), connection files (retrieve records into the temporary database and copies into user's personal databases), and output styles (personal database can be used with regards to the standard word-processors to create the citation in the text of the document and to create a list of references in the end of documents).

5.1. What can be done using Endnote

The following things listed below can be done using Endnote.

- Creating a customized library of all your references.
- Insert those references in Microsoft Word and Endnote will automatically create citations and a bibliography matching the requirements of your selected journal or style manual; it has over 6,000 bibliographic styles from which to choose.
- Attach PDFs, sound files, videos, or any other kind of file to your references – up to 45 files per record.
- Read and annotate attached PDFs.
- Organize your library using groups to categorize references by project, subject, or anything else you choose; the same reference can be in as many groups as you want.
- Sync your Endnote references and groups across multiple computers, share references with others, and access your references from almost anywhere with any Internet browser by logging into your EndNote online account at my.endnote.com.
- Cite while you write Another important advantage of literature management programmes is, that they can be integrated directly into a word processor (for example Word). Thus it is possible to “cite while you write”, or cwyw for short. Endnote Basic offers a cwyw plugin for MS Word (for both Windows and Mac). This has to be downloaded. It can be found at *Format » Cite while you write plugin* or at *Downloads*.
- Research directly in Endnote Literature can also be researched directly in Endnote. Access to the university library's resources has already been set up, you need no further parameter data. Access is available at *Collect » Online Search » Select... » U St.Gallen*. However, we do recommend you search for literature in MetaSearch and our databases where you have multiple search and filter options.

The image shows a screenshot of the EndNote X7/X8 software interface. The interface includes a sidebar with navigation options like 'My Library', 'All References', and 'Groups'. The main window displays a list of references with columns for Author, Year, and Title. A search bar is visible at the top. A PDF viewer on the right shows a document with a sticky note. Surrounding the screenshot are several callout boxes with arrows pointing to specific features:

- Sync your library:** Sync across desktop, online, and iPad®.
- Search easily:** Use Online Search Mode to access thousands of online resources within EndNote.
- Insert citations directly:** Bring citations and references right into Word.
- Share your library:** Collaborate with up to 100 other EndNote X7/X8 users.
- Organize your references:** Create groups and drag and drop your references into them, or create automatic smart groups and let EndNote take care of this for you.
- Activity Feed:** An interactive Activity Feed reflects the latest changes made to the shared library, and displays when new members join.
- View and annotate your PDFs:** Add sticky notes to your PDFs and search for them later. Use the built-in email functionality to quickly share a reference and its file attachments with others.

6. Use of Endnote in R & D Libraries:

Researchers are using this tool from past few years and find very useful to our requirement being associated with R&D. Primarily we using this tool for following functions.

1. Searching papers on given Targets or Diseased area using Pubmed.
2. Export citation and downloading of available pdf's upon user request.
3. create file for individual search tem for future usage
4. Exporting of references
5. Making format of references in requisite journal style
6. Periodically updating scientific literature on given Keywords / Targets
7. Data analysis purpose

7. Endnote Comparison with other Citation Tools

Features	EndNote	EndNote Basic	Mendeley	Zotero
Cost	\$\$\$ Student discount	Free up to 2GB	Free up to 2GB	Free up to 300MB
Share resources w/ others	YES	YES	YES	YES
Social network	NO	NO	YES	YES
Compatible w/current browsers	Not web-based	YES	YES	Firefox – full features Does not work W/ IE
Direct export from databases	YES	SOME	YES	YES
Creates formatted bibliographies, in-text citations, & footnotes	YES	YES	YES	YES
Store PDFs	YES	NO	YES	YES
Annotate PDFs	YES	NO	YES	NO
Extract data from PDFs	SOME	NO	YES	YES
Citation styles	5000+ Customizable	21	6000+	16 installed 6000+ can be added
Access	Desktop	Web	Web & Desktop	Firefox extension
Mobile Technology	iPad	NO	YES	YES
Accessibility	ADA compliant	NO information	Not accessible	Not enough information

8. Conclusion

Managing references has always been a difficult task in reporting research results and producing academic writings. Bibliographical information of cited references needs to be provided properly, so that readers may find them if they need to. It is time-consuming to write down the bibliographic information of references manually, and, more importantly, this would invariably produce some errors. Within the literature, the inaccurate bibliographical information stemming from references has been considered as a major hurdle in the retrieval of these resources. Despite being underreported, reference management tools are frequently used by authors of systematic reviews. The transparency, reproducibility and quality of systematic reviews may be enhanced through increased reporting of reference management tools usage.

REFERENCES

- [1]. . Perkel, J. M. (2015). Eight ways to clean a digital library. *Nature*, 527(7576), 123.
- [2]. Basak, S. K. (2015). A comparison of three reference management software: Jabref, zotero, and endnote. *International Journal of Research in Information Technology*, 3(4), 223-231.
- [3]. Lorenzetti, D. L., & Ghali, W. A. (2013). Reference management software for systematic reviews and meta-analyses: an exploration of usage and usability. *BMC medical research methodology*, 13(1), 141.
- [4]. Sarrafzadeh, M., & Hazeri, A. (2014). The familiarity and use of reference management software by LIS faculties in Iran. *New Library World*, 115(11/12), 558-570.
- [5]. Francese, E. (2013). Usage of reference management software at the University of Torino. *Journal of Library and Information Science*, 4(2), 145.

- [6]. Francese, E. (2015). The usage of reference management software (RMS) in an academic environment.
- [7]. Endnote (2017). Retrieved from <http://umb.libguides.com/managecitations>
- [8]. Libguide (2017). Retrieved from <http://libguides.mit.edu/references>