Writing references and using citation management software

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ABSTRACT

The correct citation of references is obligatory to gain scientific credibility, to honor the original ideas of previous authors and to avoid plagiarism. Currently, researchers can easily find, cite and store references using citation management software. In this review, two popular citation management software programs (EndNote and Mendeley) are summarized.

Key words: Bibliography organization; citation management software; EndNote; Mendeley; reference citation.

Introduction

Updated Dictionary of the Turkish Language published by Turkish Language Association defines the word “Source” as “documents referred to, and used in researches, and investigations, reference”.^[1] In the same dictionary the word ‘literature’ is synonymous with the ‘reference’.^[1] In the same dictionary definition of the word “References” is given as “a list of the best selection of publications concerning a predetermined subject, place and/or era, bibliography”.^[1]

While writing a manuscript on his/her study, a scientist cites other studies which will support or contradict the objective, methodology or outcomes of his/her study in the ‘Introduction’, and ‘Discussion’ sections of the study. While using the written opinions of other scientists, the author(s) of the manuscript:^[2]

- Can express these opinion with his/her own words.
- Can summarize these opinions using his/her own words.
- Can refer to them without mentioning their contents or use the data of the cited study.

The above-mentioned items are called indirect citation, citation or reference, respectively. The ideas used in indirect citations or references belong to others, but words used to explain them should not be placed within quotation marks.

- The referenced source can be cited using the same words or sentences which should be indicated within double-quotes (“.....”).
- The author can use a reference cited in another publication (a secondary reference). Preferably citation of the sources not available to the author is not desired. However occasionally as is the case in social sciences, inaccessible sources can be used with the indication of their being secondary references

There is no need to indicate references for information very well known by the readers. For instance, any reference should not be written for the sentence “One of the most important causes of the lower urinary symptoms (LUTS) in men is benign prostatic hyperplasia (BPH)” mentioned in a review article on benign prostatic hyperplasia.^[3] However if the same sentence is cited in a journal read by non-urologists, then its reference should be indicated.

Indication of references in scientific publications priorly ensures access to the cited opinions from its original sources which enables improved comprehension of the the study. Thanks to the citation of properly selected references, the article gains scientific prestige. To that end, the selected references should have been published in peer-reviewed credible journals, and contain original opinions about

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the subject. Therefore, unpublished data, data obtained from personal communications or isolated case reports should not be used as references. If they should be used, their characteristic features should be indicated, and permission of the author(s) for the publication of data should be obtained.^[4]

Direct citation ideally reflects the viewpoint of the referred author. However over-citation might suggest the author's difficulty in expressing his/her own opinions.

Citation is one of the important components of the scientific ethics which honours the person who came up with an original idea. Publication of the opinions of others as if they were his/her ideas is considered as plagiarism.^[5,6] Recently released Regulations for Higher Education Council of Turkey Scientific Research and Publication Ethics explain authorizations, and responsibilities of the committees established to evaluate cases of plagiarism.^[7]

In biomedical papers, information related to the authors, title, date of publication etc. of the cited source included in the 'References' section is called masthead, and it takes different forms based on its original source:

1. Book: Author (authors), title of the book, number of editions, publishing company, date of publication, and if appropriate, the pages of the extracted citations (if available, most of the time for books), and International Standard Book Number; ISBN are indicated.
2. Article: Author (authors), title of the article, name of the journal, date of publication, and number of the pages (for some periodicals Serial Item and Contribution Identifier; SICI International Standard Serial Number; ISSN can be used. For articles published online Digital Object Identifier; DOI can be used. Finally most of the biomedical articles have descriptive numbers assigned for PubMed (PubMed Identification; PMID) which is the database of American National Library of Medicine; NLM).
3. Online sources (internet, web): Author (authors), if suitable title of the article, and internet address (Uniform Resource Locator; URL), date of publication (if not available please note), and date of access to the internet address (Some institutes [ie. www.webcitation.org; WebCite®] provide archiving services to maintain online sources). Archival source address should be indicated if this service is used).

Many writing styles can be used to construct a list of references. Although their contents do not differ greatly, each style has been developed to meet the requirements of the relevant discipline. In social sciences Chicago Style^[8] which predominantly use footnotes, and Harvard Style which indicates name of the author, and date of publication in parentheses can be cited as examples.

^[9] Harvard Style is occasionally used in medical journals.

However in biomedical articles most frequently numeric system (Vancouver Style) which was based on the works of International Committee of Medical Journal Editors (ICMJE) in 1978 was used.^[10] Accordingly, references are numbered in the their first cited place in the text with Arabic numerals. Reference numbers can be placed within parentheses, square brackets or at the end of the sentence as superscripts. Each reference is numbered once, and arranged in that order among list of references. In the References section, punctuation marks (comma, point, semicolon, parenthesis), and writing styles (bold, italic, underlined) are used to separate components of the reference according to the target journal. As an example, the masthead of the article in a Reference section of *Turkish Journal of Urology* is shown. More detailed information about numeric style is available in the book prepared by NLM.^[11] Index Medicus, and above-mentioned guidelines can be used about abbreviations requested for the names of the journals.

Citation Management Software Programs

Though referencing is very important, even in many peer-reviewed journals many mistakes have been encountered.^[12] Mistakes can arise from discrepancies between the source of the reference, and citation attributed to this reference, erroneous placement of the citation in the text, and inaccurate identification of the reference among the list of references. Accurate, and complete recording of the references is one of the basic responsibilities of the authors. For the method of writing references, most simply, "Add Files" icon in the "References" menu of the "Microsoft Word" program can be used.^[13] However if we consider that numerous references are used in medical review articles, use of citation management software programs (reference management software, citation management software, personal bibliographic management software) decreases the workload of the authors, and may prevent erroneous applications.^[14]

These programs are designed to enter references into personal computer systems for future use. After online recording of the citation, it can be used over and over again, and a list of references can be constructed. Basic components of the program are database, and a style system where the references are expressed. In most of the programs, they are integrated with a word processor program (ie. Microsoft Word (MS Word or Apache Open Office) so as to place selected references in the text. In some programs writing styles of the journals are indicated with a coding as Citation Style Language; CSL). These programs can use open-source database for CLS. Besides some programs have a system which is used to make searches in electronic libraries. They have also enable transfer of these citations from electronic libraries into PC programs. More advanced programs together with citation mastheads allow recording of electronic formats (PDF, DOC, RTF, HTML, EPUB etc), taking notes on them, sharing information, and social labeling.^[15,16]

In this style, firstly last name, then initials of the authors' first names are indicated. In the presence of more than six authors, at the end of the last name the abbreviation et al. is placed. Following the names of the authors, the title of the article is given.

Gill IS, Kaouk JH, Meraney AM, Desai MM, Ulchaker JC, Klein EA et al. Laparoscopic radical cystectomy and continent orthotopicileal neobladder performed completely intracorporeally: the initial experience *J Urol* 2002;168:13-8

Note that as punctuation marks dots are used to separate the names of the authors from the abbreviation of the journal title

Note that to separate the number of the volume from the date of the publication, and page numbers semicolon, and comma are used, respectively

Figure 1. Masthead of an article published in the *Turkish Journal of Urology*

Table 1. Comparisons of citation management programs					
Characteristics	EndNote	Mendeley	Zotero	RefWorks	Papers
Cost (Basic Program)	Paid	Free	Free	Paid	Paid
Free internet storage space	1GB	1GB	100 MB	----	----
PDF processing, and MS Word compatible	PDF/ MSWord	PDF/ MSWord	PDF/ MSWord	MSWord	PDF/ MSWord
Platform matching	Available	Available	Available	None	None
Electronic library research	Available	None	None	Available	Available
Cooperation (Formation of group social network)	Private groups	Private, and public groups, social network	Private, and public groups, social network	Private groups	Social network
Technology	Library search	----	----	Library search	----
Metadata search	DOI, PMID	DOI, PMID	DOI, PMID	DOI	DOI, PMID
Journal writing style	Numerous	Restricted with CSL	Restricted with CSL	Numerous	Restricted with CSL

With integration of the electronic format into some of these programs, thanks to "metadata extracting" function the masthead of the article is recognised automatically.^[17] However, it should not be forgotten that these programs do not follow the most updated writing rules of the journals, especially some inconsistencies might be seen in the use of metadata. Therefore before submitting the manuscript to the journal the masthead of the manuscript should be controlled in compliance with the "Information to Authors" section.^[18,19] Managing citations online in different computers (laptop, and mobile devices etc.) is called web platform matching.

Many commercial, and open- source citation management programs are available.^[20] Some of them may be listed as EndNote (www.endnote.com), RefWorks (www.refworks.com), Papers (www.mekentosj.com), Zotero (www.zotero.org), and Mendeley (www.mendeley.com) (Table 1).

Since the authors of this article are mostly experienced with EndNote, and Mendeley programs, these programs are described separately.

EndNote

EndNote is a software program developed by Thomson Reuters. Its latest version is EndNote X7. Licenses can be purchased online for personal or institutional use. It can be installed in personal computers (different versions of EndNote Desktop are available for Windows and Mac operating systems), and internet-based (EndNote Web) version can be used. EndNote Web can provide advantages including especially collaboration, and source sharing among scientists. With a single user's licence, EndNote Desktop program can be installed in three computers used by the same user. Visual materials, and technical support are provided in the website of the program.

After installing the program, the user can construct reference libraries as many as he/she desires. Mainly four major methods are available to include references in these libraries:

1. Filters are created in electronically linked library to search for references.
2. By means of linked files defined in EndNote, searches are made directly inside the program (Figure 2).

3. Any PDF file or a folder containing PDF files can be transferred into a program (import function). Thus, metadata is extracted from PDF files, and masthead of the reference is read.
4. Internet domain names can be constructed manually

In every reference library the possibility of creating groups, and subgroups facilitates classification of references. Besides, the same references may be cited many times in the library.

Cite While You Write (CWYW) module in the EndNote program ensures integration between EndNote, and MSWord (Figure 3). Using this module while writing the manuscript, references are placed according to the writing rules of the selected journal, and the list of references can be arranged. Then the references can be placed in compliance with the writing rule of another journal.^[21]

When compared with other programs, the superiority of this program is that it contains higher number of journal writing styles. In EndNote X6 more than 5000 writing styles are found. In addition to a reference list panel for major journals, it also displays a comprehensive style collection, and provides application, and technological support. However it has many disadvantages. It is not free of charge. Its operating system requires

use of more than one program, and it doesn't support mobile technologies.

Mendeley

As is the case with EndNote, the program used in personal computers (Mendeley Desktop), and its internet-based program (Mendeley Web) are not separated from each other. With that respect, it has superiorities as social networking, and establishing cooperation, and collaboration among users. It can construct private or public network groups online. With this respect Mendeley has been resembled to music sharing program Last.fm.^[22] Last.fm considers researches of their listeners, and ratings, and recommends new songs for their listeners. Similarly in consideration of our tagged, and gathered scientific papers, Mendeley Suggest program recommends us new articles.

Basic program can be registered, and downloaded from its internet page free of charge which also provides >1 gigabyte (GB) storage space. Its paid versions provide a greater storage space, and a wider collaboration opportunities online.

The following methods can be used to add references to this program:

1. A PDF file (Add File) or a folder containing PDF documents (Add Folder) can be added directly to the program.

Figure 2. Using the EndNote X6 program, searching the key words “obstetric” in abstracts, and “anesthesia” in all fields in the 2012 issues of the *Journal of Anesthesiology*

Figure 3. Operating “Cite While You Write” module in the EndNote program, and use of EndNote in MSWord

2. If all new articles are contained in a single folder, then every other new article can be included in the folder using its Watch Folder function
3. Entries can be added manually using Add Entry Manually function.

Unfortunately, different from EndNote, this program does not directly allow screening of electronic libraries, However if PMID number of or DOI address of the article is known, from Add Entry Manually its source information can be obtained automatically. From Tools menu, Install MSWord Plugin program should be chosen to add newly accessed sources to the word processing program. In the new versions of MSWord program, in the References menu, an adjunct to Mendeley (Mendeley Cite-O-Matic) appears. Thus during the writing process, “Mendeley Cite-O-Matic” can be used to transfer references selected from inside the Mendeley program into

the References section of the manuscript (Figure 4). Presently, Mendeley program has limited number of journal writing styles when compared with EndNote program. After completion, and critical review of the manuscript Export button is clicked to remove reference flags seen as gray strips in the text, and the writing process is finalized.

As is in the EndNote program, Mendeley program has also PDF reading, and processing function (Figure 5).^[23] Thanks to this function, if the manuscripts are written in the PDF format, notes can be taken on the text, they can be underlined, text and figures can be copied partially or totally.

Selection of a program

Many of the paid programs are free for future users during a trial period. So researchers can select the program mostly suited to their needs. For appropriate selection of a program the answers

Figure 4. Addition of references from Mendeley program using Mendeley Cite-O-matic included in MSWord

to the following questions proposed by Steele should be considered^[19]:

1. Does the program have adequate number of writing styles? Does it especially encompass all journals within the field of the interest of the researcher(s)?
2. Does it have an interface which can easily construct unavailable writing styles?
3. Does the program permit only placement of citations? Does it have a capacity to screen electronic libraries, and transfer appropriate references into the program?
4. Does the program facilitate organization of all manuscript or does it only sort, and arrange references?
5. To what extent is the program user-friendly? Does it have a challenging interface? Does it provide technical support?
6. Is the program occupy much disk space? Is it compatible with the operating system (Mac, Windows or Linux etc.) used? Is it compatible with the word processing program used?

7. What is the cost of the program?

In addition to these questions, if we consider rapid developments in mobile technologies, the compatibility of the program with smart phone, tablet computers, and e-book readers linked to websites should be also inquired. Besides, reference storage files used by many programs (for EndNote XML, and for Zotero, zotero.sqlite etc.) can be opened by other citation management programs which conveys importance for cooperation, and in collaboration among different users.

As a conclusion, citation management programs facilitate the life of the researcher. If used carefully, with the help of citation management programs, reference lists are prepared accurately, and more properly managed in personal libraries, and sharing publications with other researchers is made possible.

Figure 5. Reading manuscripts written in PDF format, taking notes, and tagging using both EndNote, and Mendeley programs

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