The Use of Citation and Bibliographic Reference Management Software in Sociology: A Field Study of a Sample of Academic Staff in the Department of Sociology, Ibn Khaldoun University of Tiaret

Sawsen Bouzebra

Criminal Sociology , Ibn Khaldoun University of Tiaret, Algeria
Email: sawsen.bouzebra@univ-tiaret.dz

Abstract

This exploratory study seeks to identify the extent to which academic staff in the Department of Sociology at the University of Tiaret use citation and reference management software for scholarly documentation. It aims to provide an evidence-based picture of the actual level of interest in and adoption of modern technologies within the scientific research environment. The study was conducted with a sample of 30 academic staff members from the Department of Sociology at the University of Tiaret. The findings indicate a shortfall in the use of citation and reference management software among sociology academics. This is primarily due to limited proficiency in the techniques and methods required to use such programs, as well as a preference for manual approaches.

Keywords: citation; reference management software; scholarly documentation; bibliographic documentation systems.

Introduction:

For several years, Algerian University has sought to encourage and strengthen the shift from traditional to digital and modern practices, thereby keeping pace with developments in universities worldwide. In this context, Algerian universities have relied on purchasing licences for software designed to detect academic plagiarism in Arabic and foreign languages or on the use of freely available software accessible via the internet as part of supervisory measures and preventive actions against academic misconduct. The effectiveness of higher education is linked to learners' understanding of economic, legal, and social issues; their ability to obtain and use information through lawful and ethical means; and their use of an appropriate documentation style to indicate the sources consulted (Kessler & Van Ullen, 2005).

Citation, or quotation, constitutes one of the fundamental processes through which researchers construct scholarly and scientific papers. Through citations, the researcher may substantiate an argument or present an opposing idea; however, the information used must be attributed to its original authors to avoid legal liability and comply with the researcher's scholarly ethics. For this purpose, several software programs have been developed to support the formatting and management of quotations and citations, facilitating their adoption, organisation, ordering, and classification of their elements, particularly given that this process requires both time and precision.

Research Problem:

In light of the digital knowledge transformation of Algerian universities, the increasing volume

of intellectual output, the abundance of information, and the ease of access to information, particularly via the internet, numerous challenges have emerged concerning the credibility of information, its use, and the manner in which it is cited. Academic staff and researchers are therefore obliged to ensure careful verification and organisation of the information and citations used in their research outputs to avoid any difficulties or ambiguity regarding the source of the information. Accordingly, the use of various bibliographic reference management programmes by academic staff has become necessary.

In practice, although technology facilitates access to information for academic work, it has added further complexity by requiring the documentation of a far wider range of digital sources (such as blogs, forums, conference proceedings, wiki sites, and so forth) than the traditional formats previously used in libraries (Couture, 2010). Conversely, through interaction with colleagues, we have observed that such programmes are rarely used or are unknown to some researchers. The research problem was formulated as follows: Which reference and citation management software do academic staff in the Department of Sociology at Ibn Khaldoun University know and use? Is the lack of technical skills related to bibliographic database management software associated with its limited use among academic staff in the Department of Sociology at Ibn Khaldoun University, Tiaret?

Study objectives:

➢ To identify the extent of sociology academics' awareness of reference management software within the Department of Sociology at the University of Tiaret.
➢ To examine how sociology academics use citation and reference management software in their research work.

➢ To explore the most frequently used software among sociology academics.
➢ To identify the difficulties that hinder academic staff from using these bibliographic programs.

Significance of the Study:

The significance of this study lies in its engagement with an important topic: documentation in scientific research and the mechanisms by which it is managed so that researchers may avoid falling under suspicion of academic plagiarism. This is consistent with processes of digital transformation from traditional, manual practices to digital approaches enabled by software. Such programmes help preserve researchers' intellectual effort and facilitate the use and sharing of references.

Key Concepts of the Study

Citation: Citation is "an explicit attribution to one or more authors of works or parts of works, or even of ideas that inspired a particular production" (Cadieux, Morinière, & Simonnot, 2018, p. 3).

Reference Management Software: These are digital programs that enable the importation of references from the internet and their organised storage. Bibliographic database management software facilitates the creation of digital libraries, which, in turn, enable the automatic generation of reference lists in various formats according to the required style. This makes it possible to cite sources within a word processor, whereby the bibliographic database management programme automatically generates the reference list at the end of the text. Such programmes have developed extensively, offering users paid versions (EndNote) and free versions (Zotero, Mendeley).

Although the development of these tools has improved their usability, a solid technological foundation remains necessary at the beginning of the learning process to master all their functions. Nevertheless, hesitation persists among researchers regarding the use of bibliographic database management software. Some researchers continue to prefer entering their bibliographic references manually (and, at times, organising them via word-processing programmes) (Salem & Fehrmann, 2013).

The software is used primarily for the following four functions: generating reference lists for research, creating folders to organise references, inserting references directly into word-processing documents, and saving sources from databases. The decision to use reference management software is also driven by four main factors: ease of use, free access, the ability to integrate references directly into word-processing documents, and the availability of valuable and essential features (Speare, 2018).

Speare (2018) noted that numerous obstacles hinder the use of bibliographic database management software, including the following:

> - the time required to learn the software;
> - the time required to build the database;
> - user interfaces that are not user friendly;
> - lack of self-confidence;
> - students' limited experience in using documentation software;
> - a small number of references that need to be added to the work.

EndNote is a citation organisation and storage program that enables the insertion of references into Word documents to assist during the writing of scientific research. Information such as the author, title, and publication date may be entered either manually by creating a personal library or automatically by importing it from library research databases. It is not free of charge and is not open source. Among its features is support for offline use, and it also allows local storage on the user's personal computer.

Mendeley is a free, open-source programme that enables the creation and sharing of bibliographic databases. Its ease of use distinguishes it from other programs, its compatibility with various platforms and browsers, and its ability to manage PDF files. It can also be installed on mobile devices through Android and iOS applications, enabling sharing and exchange.

Zotero was developed by a group of researchers at the Centre for History and New Media at George Mason University. It is also free and open source and supports 14 languages.

Papers, formerly known as ReadCube Papers, are tools for reference management and organising research papers. It enables synchronisation of a personal library across different devices (desktop, browser, and mobile). The programme enables the search for and access to more than 130 million articles. It is not free, but it offers a 30-day trial period.

Bibliographic documentation systems are a set of rules and principles for organising and formatting source data (books, articles, theses, etc.) in a final reference list or in footnotes within the text to facilitate access to information, avoid plagiarism, and enhance the credibility of the research. These systems differ from classical, traditional styles such as Chicago or Harvard, which document reference details within the work at the bottom of the page in what is termed a footnote, and modern systems, among the most prominent of which are APA and MLA, which document details within the text in parentheses. All these systems agree on the core elements, such as the author's name, title, publisher, and date of publication, while differing in their ordering and formatting in comparison with other systems.

Methodological Procedures of the Study:

The study adopted a descriptive approach and used an electronic questionnaire as the data collection instrument. The sample was purposive, with units selected incidentally from the sociology academic staff at Ibn Khaldoun University of Tiaret. These individuals received the electronic questionnaire and completed and returned it electronically. The sample comprised 30 academic staff members, representing 65% of the department's permanent sociology academic staff.

Previous studies:

Several foreign and Arab studies have addressed the use of software in reference and citation management. However, at the local level, we found very few such studies. Among the local Arab studies that align with the context of the present study, the following is noted:

First Study: The study by Chabounia and Laabnia (2022) examined doctoral students' attitudes towards the use of reference management software in scientific research and was conducted as a field study at 8 May 1945 University, Guelma. The study aimed to determine the degree of association between the actual use of reference management software and the extent to which doctoral students' research gratifications are achieved. It also sought to examine the extent to which students' ability to use reference management software contributes to overcoming the problems and difficulties associated with its use in scientific research. This was pursued through the following research questions:

What are the levels of doctoral students' use of reference management software in scientific research?

Is there an association between the actual use of reference management software and the achievement of doctoral students' research gratification?

Is there an association between skills in using reference management software and overcoming the difficulties of its use in scientific research?

Are there statistically significant differences in doctoral students' use of reference management software in conducting scientific research according to their personal variables?

The researchers adopted a descriptive approach and used an electronic questionnaire to collect data, which were then analysed via descriptive statistics in the Statistical Package for the Social Sciences (SPSS). The research sample included 70 doctoral students from the Faculty of Humanities and Social Sciences and the Faculty of Economic, Commercial and Management Sciences.

The study yielded several findings, the most important of which were that doctoral students at Guelma University use reference management software to a moderate extent in preparing their scientific research, owing to difficulties with its use, and that they prefer manual reference citation. The use of reference management software by doctoral students at Guelma University in preparing their research is associated with achieving various gratifications, particularly saving and organising references and reducing documentation errors. The study also indicated that students face difficulties that hinder their use of these programmes, especially in language. Furthermore, there are no differences in the levels of use among doctoral students attributable to personal variables.

Second Study:

The second study, bibliographic reference management software in the context of academic plagiarism: characteristics and uses—Mendeley as a model—was conducted by Titilia (2021). The study aimed to present the concept and forms of academic plagiarism and the role of bibliographic reference management software in

avoiding it, with particular attention given to Mendeley. Accordingly, the researcher posed the following questions: What is the importance and uses of Mendeley for managing bibliographic references in the context of academic plagiarism? What are its advantages and characteristics?

Documentary analysis was adopted to achieve the study objectives. The study revealed that the reference management programme under examination (Mendeley) offers several advantages over comparable programmes, particularly its free availability, ease of use, and cross-platform and browser compatibility. It also has high capabilities in terms of file management, data extraction, and sharing references with colleagues. Moreover, it facilitates the organisation and correct citation of researchers' information, thereby preserving the integrity of scientific research and enabling researchers to avoid the risk of unintentional plagiarism.

Third Study:

The third study, on postgraduate students' use of scholarly documentation software, was conducted by Abu Omar (2024). The study raised several questions, most notably: What is the level of knowledge of reference management and scholarly documentation software among postgraduate students at Al-Azhar University (Girls' Branch), Cairo? Which programmes are most used? What are the main reasons for using these programs, and what are their features? What obstacles and challenges hinder the use of reference management and scholarly documentation software?

To address these questions, the study employed a descriptive approach, using a research sample of 302 postgraduate students across all specialisations and a questionnaire as the principal instrument.

The most important results were as follows:

➢ The need to increase awareness of these programmes and the level of knowledge of reference management software among postgraduate students were estimated at 76%.
➢ The level of use was estimated at 67%, compared with 33% who did not use them.
➢ The study also revealed that students in medical and scientific faculties were the most frequent users (41%), followed by those in theoretical faculties (18%) and those in the Faculty of Islamic and Arabic Studies (8%).

The study further revealed that the most frequently used reference management programme was Ennote, at 29.7%, followed by Mendeley, at 35.2%. It also found that the most significant obstacle faced by these students was language, as the programmes do not support Arabic, and they had not received specific training in its use.

Fourth Study:

The fourth study, *Reference Management and Scholarly Documentation Software: A Survey Study of Faculty Members at the Faculty of Humanities Studies, Al-Azhar University in Cairo*, was conducted by Al-Hajj Omar (2023). The study aimed to document the current situation regarding faculty members' use of reference management software at the Faculty of Humanities Studies, Al-Azhar University in Cairo, to provide an accurate picture of their interest in information technology within the scientific research environment. This was addressed through the following questions:

What is the actual status of the level of electronic literacy among faculty members at the Faculty of Humanities Studies?

What are the sources through which faculty members become aware of these programmes? Which programmes are the most widely recognised?

To what extent do faculty members use reference management software?

What obstacles hinder faculty members' use of reference management software?

The study was conducted at Al-Azhar University in Cairo (Girls' Branch). The research population comprised faculty members and assistant staff across all departments of the Faculty of Humanities Studies. The sample size was 215, representing 47.57% of the sample. The study adopted a descriptive approach and used a questionnaire as the data collection instrument. The most important findings were as follows:

➢ Most faculty respondents (75.35%) did not use reference management software;

instead, they relied on manual documentation of references or automated documentation in Word, despite 80.93% of respondents being proficient in computers.

➢ In contrast, 24.65% used reference management software. Mendeley was the most frequently used programme, at 41.51%, followed by EndNote at 32.07%.

➢ With respect to reasons for use, 91.4% of the respondents used this software to prepare reference lists in accordance with the required citation styles.

➢ The study also revealed that the most significant obstacle to using these programs was their lack of support for Arabic, followed by technical problems and difficulties during use, at rates of 81.8% and 80%, respectively.

Field Component: The most important results of the study were as follows:

Table 1: *General Data on the Study Sample*

Data	Category	Frequency	Percentage
Gender of academic staff	Male	17	56.66%
	Female	13	43.33%
	Total	30	100%
Age groups	[21–36)	3	10%
	(36–51)	21	70%
	[51–65]	6	20%
	Total	30	100%
Academic level	Master's	4	13.33%
	Doctorate	26	86.67%
	Total	30	100%

Source: Prepared by the researcher on the basis of questionnaire data.

Table 1 presents the distribution of the study sample of sociology academic staff at Ibn Khaldoun University of Tiaret by personal characteristics: gender, age, and academic level. Males accounted for 56.66% of the sample,

whereas females accounted for 43.33%. With respect to age, most respondents fall within the (36–51) age group, at 70%, compared with 20% and 10% for the [51–65] and [21–36] age groups, respectively. The table also shows that

the majority of respondents hold doctoral degrees, indicating that they are assistant professors (A–B) or professors in higher education.

Table 2: *Academic Staff's Computer Proficiency and Ownership of Computers*

Data	Category	Frequency	Percentage
Academic staff's computer proficiency	Yes	24	80%
	No	6	20%
	Total	30	100%
Academic staff's ownership of computers	Yes	30	100%
	Total	30	100%

Table 2 presents the distribution of respondents in the study sample by computer ownership and level of computer proficiency. All the academic staff respondents own computers. However, only 80% reported being proficient in computer use and, consequently, able to make optimal use of these devices. This finding is consistent with the findings of Al-Hajj Omar (2023), who reported that 80.93% of faculty members at the Faculty of Humanities Studies, Al-Azhar University in Cairo, were proficient in computer use

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Table 3: *Sociology Academic Staff's Level of Awareness of Reference Management Software*

Software	Frequency[†]	Percentage
EndNote	10	33.33%
Zotero	6	20%
Mendeley	4	13.33%
Papers	1	3.33%
Other (APA, ASA, Chicago)	2	6.66%
I do not know them	14	46.66%

Source: Prepared by the researcher on the basis of questionnaire data.

[†] Multiple-choice response (i.e., respondents may select more than one option; therefore, the total does not represent the size of the study sample, but rather the total number of options selected. Percentages are calculated based on the total number of respondents in the sample [N = 30].

Table 3 shows the distribution of respondents and sociology academic staff at Ibn Khaldoun University of Tiaret according to their level of awareness of reference management software. The results indicate that 46.66% of academic staff are not aware of the existence of such programmes for managing references and citations. In contrast, the percentages of those who were aware of EndNote and Zotero were 33.33% and 20%, respectively. The awareness of Mendeley and Papers was 13.33% and 3.33%, respectively. These findings align with Abu Omar (2024), who indicated a deficit and a need to increase awareness and knowledge of reference and citation management software.

Table 4: *Sociology Academic Staff's Use of Reference Management Software*

Category	Software	Frequency‡	Percentage
Uses software	EndNote	8	26.66%
	Zotero	5	16.66%
	Mendeley	2	6.66%
	Papers	1	3.33%
	Other (Word)	1	3.33%
Does not use software	—	18	60%

Source: Prepared by the two researchers on the basis of questionnaire data.

Table 4 shows the distribution of the study sample of sociology academic staff at Ibn Khaldoun University of Tiaret according to their level of use of reference and citation management software. The results indicate that the majority of academic staff (60%) do not use, or have not previously used, citation and reference management software in their studies. In contrast, 26.66% and 16.66% use EndNote and Zotero, respectively, whereas smaller proportions use Mendeley (6.66%) and Papers (3.33%). According to their statements, this is attributable either to a lack of mastery of the basic principles of using such software or to a preference for manual techniques.

This is consistent with the findings of Chabounia and Laabnia (2022), who reported that doctoral students at Guelma University use reference management software to a moderate extent in preparing their scientific research owing to difficulties associated with its use and that they prefer manual reference citation. This finding is also consistent with that of Al-Hajj Omar (2023), who reported that faculty members at the Faculty of Humanities Studies, Al-Azhar University in Cairo, rely either on manual documentation of references or on automated documentation in Word.

Notably, EndNote is used more frequently, despite being a paid programme, than other programmes used by academic staff in the Department of Sociology, such as Mendeley or Zotero. This may be attributed to the possibility of obtaining licenced copies through research

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‡ The same note applies to the total of the frequencies.

laboratories in which these academic staff are active.

This interpretation may also be supported by the findings of Abu Omar (2024), which indicated an association between the scientific and research field, the language supported by the software, and the level of use. Medical and scientific fields, which, in most cases, rely on foreign languages in training and scholarly work, are the most frequent users of such programmes, compared with other literary and humanities fields, which often use Arabic in their work; Arabic is not supported in most reference management programmes.

Table 5: *Sociology Academic Staff Participation in Training Courses on Reference Management Software*

Response	Frequency	Percentage
Yes	8	26.7%
No	22	73.3%
Total	30	100%

Source: Prepared by the researcher on the basis of questionnaire data.

Table 5 above shows the distribution of respondents' sociology academic staff in the study sample according to whether they have undertaken training or capacity-building courses in reference and citation management software. This indicates that 73.3% of the respondents had not received any training in these programmes, whereas 26.7% had previously attended training courses. This is consistent with Abu Omar (2024), who noted that postgraduate students do not receive specialised training that enables them to become familiar with reference management software and use it, thereby constituting a barrier when they wish to use such programmes to produce their research or scholarly papers.

Table 6: *Academic Staff Suggestions Regarding the Use of Reference Management Software*

Suggestions	Frequency	Percentage
Training and capacity building for academic staff and students	18	60%
Integrating them into methodological courses or as a dedicated module	7	23.33%
Requiring their use in producing dissertations and field research	5	16.67%
Total	30	100%

Source: Prepared by the researcher on the basis of questionnaire data.

Table 6 presents the distribution of respondents in the study sample according to their suggestions regarding the use of various reference and citation management programs. A total of 60% of the academic staff proposed the provision of training and capacity-building for academic staff and students in using these programmes, as this is the most important reason for their limited deployment in research work, as reflected in the data in Tables 4 and 5. This is

also noted in Al-Hajj Omar (2023), Chabounia and Laabnia (2022), and Abu Omar (2024), who indicated that the key obstacles to the use of reference management software are technical difficulties, regardless of whether the user is proficient in basic computer skills. This underscores the need for dedicated training.

In addition, 23.33% of the academic staff suggested incorporating these programmes into the curriculum, either within research methodology courses or as a dedicated module. A further 16.67% considered that their use should be required for producing dissertations and field research so that both academic staff and students become familiar with and accustomed to them.

Conclusion:

On the basis of a field study on the use of reference and citation management software in the Department of Sociology at Ibn Khaldoun University of Tiaret, the following findings were reached:

There is a shortfall in the Department of Sociology at Ibn Khaldoun University of Tiaret in academics' awareness of reference management software. Specifically, 53.34% of the respondents reported awareness of reference management programmes, namely, EndNote and Zotero, as well as Mendeley and Papers, albeit at low levels. In contrast, 46.66% of the academic staff reported not being aware of any reference management programme.

The study revealed that the most frequently used programmes were EndNote, Zotero, and Mendeley. However, this use remains modest and limited compared with the facilitation these programmes offer and the time and effort savings they provide in verifying and documenting information sources and citations used in research outputs and scholarly papers.

Accordingly, sociology academics in the Department of Sociology at Ibn Khaldoun University propose scheduling training and capacity-building courses on the use of these programmes to facilitate the management of bibliographic references, thereby enabling

optimal use of the software in sociological research. They also propose integrating these programmes into students' training curricula, either within methodology modules or as dedicated courses.

On the basis of these findings, we likewise emphasise the importance of encouraging academic staff and students to use reference and citation management software, as it enables the proper use of diverse references and sources. Algerian universities should also be encouraged to purchase such software to publicise it, guide its use, and keep researchers and academic staff informed of developments in these programmes and related matters in scientific research and its evolving practices.

Finally, as an exploratory study conducted within a limited setting (the Department of Sociology at Ibn Khaldoun University), the present research remains open to future expansion through more in-depth studies encompassing additional scientific fields and other universities, which may reveal different perspectives and yield new findings.

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