

Evaluating researchers' awareness of citation management software in practical colleges at Al-Azhar University, Assiut branch

Research – English Summary

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Abstract

The study aims to assess researchers' awareness of citation management software in practical colleges at Al-Azhar University, Assiut branch, by determining their level of awareness of citation management software, monitoring the extent of their use in preparing scientific research and studies, analyzing the most common software with academic publishing standards, and revealing the most prominent obstacles related to citation management software. The study population consists of researchers in practical colleges (Medicine, Pharmacy, Science, Agriculture), numbering (1410) researchers for the academic year 2024/2025. The study sample is a stratified random sample representing 10% of the original population (141), where the representation rates reached 10.1% for the Faculty of Medicine, 10.2% for Pharmacy, 9.9% for Science, and 9.8% for Agriculture. While the results showed that researchers' awareness of citation management software was relatively good (55.3% high awareness, $M = 2.45$), with a clear understanding of its basic functions, such as generating reference lists (54.6%, $M = 2.42$) and enhancing accuracy (53.9%, $M = 2.40$), the study also revealed variations in usage; regular reliance reached 42.6% in scientific dissertations ($M = 2.25$), compared to 34.8% in scientific articles ($M = 2.13$). Meanwhile, 51.8% took advantage of the feature of modifying documentation styles ($M = 2.38$), while validation challenges remained at a rate of (39.0%, $M = 2.18$). Choosing the appropriate style was found to be difficult (34.8%, $M = 2.16$), while prominent obstacles were relatively high, prompting 31.2% to rely on manual documentation ($M = 2.40$), which reflects a gap between theoretical awareness and practical empowerment. The study recommended intensifying practical training on citation management software, establishing technical support units in colleges, encouraging the use of cloud features, and enhancing the exchange of expertise between disciplines, along with additional support for researchers in the colleges of pharmacy and agriculture.

Keywords

Reference management software, scholars

Study Overview and Methodology

The research provides a detailed quantitative analysis of the adoption, awareness, and application of reference management software by the academic research community in the practical faculties of Al-Azhar University's Asyut branch.

Research Problem and Objectives

The study addresses the increasing importance of reference management software (e.g., Mendeley, Zotero, EndNote) in modern academic research and publishing. It identifies a gap in understanding the extent of awareness and use of these tools among researchers at the Asyut branch of Al-Azhar University.

The primary objectives of the study were to:

- 1. **Assess Awareness:** Determine the level of awareness among researchers regarding reference management software.
- 2. **Monitor Usage:** Track the extent to which researchers use this software in preparing scientific research and studies.
- 3. **Analyze Popularity:** Identify the most commonly used reference management software and the reasons for their prevalence.
- 4. **Identify Obstacles:** Pinpoint the most significant challenges and constraints that researchers face when using this software.
- 5. **Propose Solutions:** Develop practical recommendations and mechanisms to enhance the utilization of RMS in scientific research.

Research Population and Sample

The study's population comprised all 1,410 researchers affiliated with the four practical colleges at the Asyut branch for the 2024/2025 academic year. A stratified random sampling method was used to select a representative sample of 141 researchers, constituting 10% of the total population.

The table below details the distribution of the total research population and the selected sample across the colleges.

Faculty	Total Population	PhD Candidates	Master's Candidates	Sample Size (n=141)	Sample Percentage
Medicine	397	219 (36.4%)	178 (22.0%)	40	10.1%
Pharmacy	283	87 (14.5%)	196 (24.2%)	29	10.2%
Science	474	213 (35.4%)	261 (32.3%)	47	9.9%
Agriculture	256	82 (13.6%)	174 (21.5%)	25	9.8%
Total	1410	601 (100%)	809 (100%)	141	10.0%

Data Collection and Analysis

- **Instrument:** A comprehensive questionnaire was designed and distributed electronically using Google Forms.
- **Reliability:** The questionnaire's reliability was validated using Cronbach's Alpha, yielding a high overall score of **0.87**, indicating strong internal consistency.
- **Response Rate:** A total of 160 questionnaires were distributed, from which 141 valid responses were collected, representing an effective response rate of **88.1%**.
- **Analysis Software:** The collected data was processed and analyzed using the Statistical Package for the Social Sciences (SPSS).

Key Findings

The study's findings are categorized into researcher awareness, usage patterns, common software preferences, and the primary challenges encountered.

1. Researcher Awareness Levels

Researchers demonstrated a relatively good level of awareness regarding the fundamental capabilities of RMS. However, awareness of advanced features and best practices was less consistent.

- **High-Level Awareness:** **55.3%** of respondents reported a high level of awareness.
- **Core Function Understanding:** There was a strong understanding of essential functions:
 - Awareness of RMS's role in creating accurate reference lists: **64.5%** strongly agreed (Mean: 2.57).
 - Recognizing the importance of RMS for generating bibliographies: **54.6%** agreed/strongly agreed (Mean: 2.42).
 - Understanding the software's ability to ensure accuracy: **53.9%** agreed/strongly agreed (Mean: 2.40).
- **Advanced Features:** Awareness was lower for more complex functionalities, such as linking software with programs like Microsoft Word (**34.0%**) and understanding how to use advanced features for organizing scientific literature (**31.2%**).

2. Usage Patterns and Practices

While awareness is high, actual usage varies significantly based on the type of research output.

- **Theses vs. Articles:** A notable disparity was found between usage in long-form and short-form academic writing.
 - **42.6%** of researchers consistently use RMS when writing theses or dissertations (Mean: 2.25).
 - Only **34.8%** use it regularly for preparing scientific articles and conference papers (Mean: 2.13).

• **Citation Style Management:** A key benefit of RMS is the ability to automatically format citations. **51.8%** of users leverage this feature to switch between different citation styles (e.g., APA, Chicago) as required by publishers (Mean: 2.38).

3. Most Commonly Used Software

The study analyzed the prevalence of specific RMS tools among the researchers. Mendeley emerged as the most widely used platform, followed closely by Zotero and EndNote.

Software	Use "Often/Always"	Use "Sometimes"	Use "Rarely/Never"	Mean Score (out of 3)
Mendeley	46.8%	33.3%	19.9%	2.27
Zotero	39.7%	39.0%	21.3%	2.18
EndNote	36.2%	35.5%	28.4%	2.08
Other (RefWorks, Citavi)	25.5%	39.0%	35.5%	1.90

4. Identified Challenges and Obstacles

Researchers identified several key barriers preventing more widespread and effective use of RMS. The lack of institutional support and training was the most prominent theme.

Challenge Description	Agree / Strongly Agree	Mean Score (out of 3)	Key Insight
Dependence on Manual Citation	54.6%	2.40	Researchers often revert to manual methods to avoid potential technical problems with the software.
Lack of University Training	53.9%	2.40	A significant majority feel there is an absence of official workshops and training sessions.
Absence of Technical Support	50.4%	2.35	When technical issues arise, researchers lack a dedicated support person or unit to consult.
Difficulty Choosing Citation Style	34.8%	2.16	Many users struggle to select the correct citation style from the numerous options available within the software.
Software Installation/Setup Issues	39.0%	2.18	A notable portion of researchers face initial hurdles with downloading and configuring the software.

Recommendations and Future Directions

Based on the study's findings, a set of actionable recommendations was developed to enhance the adoption and effective use of reference management software.

1. Intensify Practical Training:

- Organize hands-on, practical training workshops within each college, focusing on real-world application rather than just theory (**64.5% strongly support**).
- Include RMS training as a core component of postgraduate research methodology courses.

2. Establish Institutional Support:

- Create dedicated technical support units or appoint specialists within college libraries to assist researchers with installation, troubleshooting, and advanced usage (**50.4% identified this as a major gap**).
- Develop and distribute clear, concise user guides and manuals in Arabic to lower the barrier to entry (**66.7% strongly support**).

3. Promote and Incentivize Usage:

- Encourage the mandatory use of RMS for theses, dissertations, and publications submitted through the university.
- Promote the collaborative benefits of cloud-based features to research teams to improve workflow efficiency.

4. Enhance Software Accessibility and Integration:

- Ensure that college libraries provide access to licensed or premium versions of key RMS platforms (e.g., EndNote) to unlock full functionality.
- Foster inter-departmental knowledge sharing, particularly to support faculties with lower adoption rates like Pharmacy and Agriculture, to build a university-wide community of practice.