

AWARENESS AND USE OF REFERENCE MANAGEMENT TOOLS AMONG LECTURERS IN EKITI STATE POLYTECHNIC, ISAN-EKITI

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Abstract

The study investigated awareness and use of reference management tools among lecturers in Ekiti State Polytechnic, Isan-Ekiti, Nigeria. Survey research was conducted to determine the awareness and use of reference management tools among lecturers of Ekiti State Polytechnic Isan-Ekiti, Nigeria (EKSPOLY). Its population consists of 43 lecturers. A total enumeration sampling technique was adopted to allow the targeted population to participate in this study. The questionnaire was the instrument used for the data collection. Data were analyzed using descriptive and inferential statistics. Findings revealed that the Open Access Reference Management Tools the respondents were aware of were Zotero (mean=3.60) and Mendeley (mean=2.79) while the Close Access Reference Management Tools were bookends (mean=2.91), paper pile and RefWorks (mean=2.86). There was a moderate level of use of reference management tools as the majority of the respondents used Mendeley (mean=3.51), Zotero (mean=2.35) and Endnote (mean=2.33). The benefits were easiness to download and install (mean=2.12) and generate a bibliography (mean=2.07). The challenges faced were the complexity of the software (mean=2.77), manual use of reference management tools (mean=2.42) and time-consuming (mean=2.05). The study concluded that there is a moderate awareness and level of use of reference management tools among EKSPOLY lecturers despite recognizing their importance, respondents face significant challenges in effectively utilizing these tools. The study therefore recommended that institutions should organize regular training sessions and workshops to enhance lecturers' proficiency with reference management tools. At the same time, establish a support team to assist lecturers with the installation, setup and troubleshooting of reference management tools when the need arises.

Keywords: Awareness, Use, Reference management tools, Ekiti State Polytechnic

Introduction

Polytechnic could be described as a type of higher institution that provides a broad range of courses geared towards careers in sectors such as engineering, technology, applied sciences, and other professional professions (Jahun, 2017). It emphasizes technical skills and applied knowledge while offering its students both academic and practical instruction, which is frequently accomplished through industrial placements and internships. It also provides degrees and other certificates that are evaluated by polytechnic instructors, depending on the country. Every nation that has a Polytechnic depends on it to raise middle-level managers and entrepreneurs who are expected to use technology to drive the economy of the country.

Polytechnic lecturers could be regarded as educators who teach in polytechnic, which typically focus on technical and vocational education. They often teach subjects related to engineering, technology, applied sciences, and other practical fields (Azeem and Omar, 2019). Since polytechnic education often involves applied research and practical projects, lecturers need to keep track of numerous references from various sources to support their teaching and research efforts. This procedure might be streamlined using online reference management tools, which would make it simpler for lecturers to properly and effectively credit sources in their works.

The term "reference management tools" could be defined as tools that writers and researchers can use to manage project references for themselves or their organizations, as well as to record and utilize bibliographic citations, or references (Pradhan and Karmbe, 2020). Tools for managing citations or bibliographies are sometimes referred to as reference management software. Zotero, Mendeley, Endnote, RefWorks, Citavi, Jab Ref, Pro Cite, Bookends, Papers, Qiqqa, and other well-known research management programs are good examples (Borah, Hussain, Saikia and Nath, 2022). Different agencies created each of these reference management software programmes, because various journals, including Harvard and the American Psychological Association (APA), demand the references in different forms. These reference management systems allow the organization of different bibliographic styles with a single click (Gilmour and Cobus-Kuo, 2011).

The significance of reference management tools, according to Borah, Husain, Saikia, and Nath (2022), cannot be overemphasized because they assist researchers in managing references from specialized databases that enable the collection, archiving, organization, and sharing of references pertinent to the specific research area. In the same vein, academic writers use reference management tools, also known as citation management software, to create and utilise bibliographic citations. These programmes support various referencing

styles and generate references by their specifications. Once a citation is recorded, it can be used multiple times in academic books, articles, and essays; the majority of reference management packages come with databases that contain comprehensive bibliographic details of scholarly content. Furthermore, the author can create customized reference lists in various forms based on the requirements of the publication of their choice. Word processor integration is provided by several contemporary reference management solutions. According to Ijah, Anyiam and Baridam (2021), this feature minimizes the possibility of omitting a referenced source from the reference list and makes it simple to import from bibliographic databases as it generates a reference list in the chosen format automatically during article formation.

Nonetheless, several studies have been carried out to evaluate the use of reference management tools by lecturers, with varying degrees of success. Adeyemi and Sulaiman (2020), for example, evaluated the University of Ilorin lecturers' awareness and use of reference management tools and discovered that the University of Ilorin's faculty members utilize reference management tools sparingly and that the majority of them had never used ProCites, Bookends, Papers, or Qiqqa. This indicates a relatively low usage of reference management tools among the lecturers.

Bugyei, Kavi and Obeng-Koranteng (2019) assessed the awareness and usage of reference management tools among researchers of the Council for Scientific and Industrial Research Ghana. Results showed the researchers are aware of reference management tools however the usage of these tools is low. Likewise, Pathak and Jonhson (2018) investigated the use and awareness of reference management tools among community college students in New York City. The findings revealed a low awareness and use of reference management tools among community college students regardless of age, gender, race, ethnicity, field of study, undergraduate class level, English proficiency or academic level. The inference from this study is that this can be the same for polytechnic lecturers.

Scholars may struggle to fully benefit from reference management tools due to limited awareness and usage. According to Gafor (2012) awareness encompasses knowledge, consciousness and vigilance describing it as the ability to observe, sense, or remain mindful of events, objects or sensory patterns. Idiegbeyan-ose, Nkiko, and Osinulu (2016) defined awareness as the mental capacity of a person to perceive, understand, and assess a given phenomenon. Reinhardt, Mletzko, Sloep, and Drachsler (2015) defined awareness as knowledge about an item or event, competencies or abilities, and ways of activity; it is concerned with background information about the object, instance, or any other

occurrence. If the polytechnic lecturers are unaware of what reference management tools are, it will be quite difficult for them to use these resources appropriately. Hence, the lecturers at the polytechnic could make use of reference management tools provided they are knowledgeable about its features and have the necessary navigation skills. However, if they do not use it as much as they should, their awareness may be poor.

Thus it is critical to evaluate how Ekiti State Polytechnic lecturers use reference management tools to improve academic productivity and promote effective research practices in the polytechnic education sector. Even though these tools are essential for tracking and organizing references, there are significant insufficient numbers of research on their applications in academia. Exploring this field of study fills a gap in the literature while also offering important insights into the particular requirements and preferences of polytechnic lecturers. Therefore, this study will evaluate how lecturers at Ekiti State Polytechnic, Isan-Ekiti, Nigeria uses reference management tools.

Statement of the problem

The importance of reference management tools can never be overemphasized as they help create accurately vast volume of references according to the needed style of referencing while writing. Additionally, it can afford valuable insight into using open-source software in the research process and help to improve the quality of research through better referencing amongst others. However, it has been observed that many researchers including the lecturers may be unaware of the different referencing tools and their usage in managing their references. This can be a function of unfamiliarity with different reference management tools and how they can be used accordingly. As such, conducting a study to assess the lecturer's use of reference management tools for referencing is a necessity. It is based on this backdrop that this study assessed the awareness and use of reference management tools among lecturers in Ekiti State Polytechnic, Isan-Ekiti, Nigeria.

Objective of the study

The specific objectives of this study are to:

1. Know the extent of reference management tools awareness among lecturers in Ekiti State Polytechnic, Isan-Ekiti;
2. Know the level of use of reference management tools use among lecturers in Ekiti State Polytechnic, Isan-Ekiti;
3. Find out the benefits gained from the use of reference management tools among lecturers in Ekiti State Polytechnic, Isan-Ekiti; and

4. Identify the challenges associated with the use of reference management tools among lecturers in Ekiti State Polytechnic, Isan-Ekiti.

Literature Review

Studies have also been carried out on the high use of reference management tools among lecturers. Mvula (2023) examined awareness of reference management tools for research writing activity used by University Teachers. The survey method was used for the study with a population of 77 participants. The instrument used for data collection was the questionnaire. Findings revealed 56% of the participants are aware of reference management software. However, only 22.5% use Mendely, followed by Zotero (12.7%) and End note (4.2%). Also, 60% representing 43 respondents indicate they do not use reference management tools to manage their reference. It can be inferred from the study there is a low usage of reference management software among the respondents.

Mhokole and Kimaryo (2022) conducted a study on the usage of reference management software by postgraduate students at the University Of Dar es Salaam, Tanzania. A descriptive research design was employed for the study and consisted of 104 participants. A questionnaire and documentary review were the methods used to gather data. Results showed that 80% of the respondents perceive reference management software to be of help. However, 45% of the respondents do not use reference management software. The implication of this is that the majority of the respondents who are very much aware of different reference management tools and have a positive attitude do not make use of it in managing their references. Thereby the level of use is low

Adeyemi, Akanbi and Sulaiman (2020) examined awareness and usage of reference management tools: from the perspective of faculty members of the University of Ilorin. The target population was 1496 participants and a questionnaire was the instrument used to collect data from the participants. Findings revealed Mendeley has 77.5% of usage while Zotero has 60.1% of usage. However, the findings also revealed that 90.8% of the respondents never used Qiqqa software, 89.8% never used Papers software, also 69.4% never used pro cites. In addition, 60.2% of the participants occasionally used Refworks and only 49.0% made use of Endnotes. The result of the study implies that even though the respondents to a great extent used Mendeley and Zotero majority of them have never used a bulk of the reference management tools. Invariably there is a low usage of reference management tools among the respondents.

Ijah, Anyiam and Baridam (2021) investigated reference management tools for academic writings: the experience, challenges and determinants of usage in Port-Harcourt. It was a descriptive cross-sectional study among lecturers and students with a population totalling 406. The questionnaire was the tool used to collect data from the respondents. Findings showed 44.09% representing 179 of the respondents never used any reference management tools. For those that used it before, End note has 23.89% representing 97 of the respondents, 13.79% representing 56 respondents using Mendeley and 4.6% representing 19 respondents using Zotero. The study implies reference management tools use among the respondents is low.

In consonance with this, studies have also been carried out on the high use of reference management tools among lecturers such as Madhuri and Lakshmi (2021) who studied the use and awareness of reference management software tools by research scholars of library and information science in India. A survey method was adopted for the study. The population consisted of 44 respondents and a questionnaire was the tool used for data collection. Findings revealed the majority of the respondents (69%) used Mendeley to manage their references. Also, a high percentage (66%) use Zotero to manage their reference followed by Endnote (13%). However, reasons were asked why the respondents preferred these reference management tools over the rest and findings showed 43.1% which represents the majority of the respondents indicated they use the reference management tools that are free of cost. It can be implied from the study that the respondents' usage of reference management tools is high.

Methodology

The study used a descriptive survey research design. This design will be applicable because the findings can be generalized to other polytechnics. It is also suitable because a systematic and thoroughly comprehensive collection of data about attitudes, beliefs, behaviour and opinions of the sampled academic staff was enabled. The study targeted the entire population of academic staff of Ekiti State Polytechnic (EKSPOLY) Isan-Ekiti, Nigeria, which consisted of 43 staff at the time of data collection. A total enumeration sampling technique was adopted to allow the targeted population to participate in the study and ensure a comprehensive representation of the institutions' academic staff. A well-structured questionnaire arranged into two major sections was used to collect data from the respondents. Section one focused on the demographic information of the respondents, while Section two was tailored towards answers to awareness, level, use benefits and challenges answering the questions raised. The questionnaire was

administered to the respondents and data collected was presented and analyzed in frequency tables, percentages and mean.

Result and Discussion

Table 1: Response Rate of the Study

Number of questionnaires distributed	Number of Questionnaires Retrieved	Response Rate (%)
43	43	100

All the questionnaires distributed were returned and found usable. Therefore the response rate was 100% and this is due to the effort and seriousness of the researchers during the data collection.

Answers to research questions

Research question one: What is the extent of reference management tools awareness among lecturers in Ekiti State Polytechnic, Isan-Ekiti?

Table 2 shows the extent of reference management tools awareness among lecturers in Ekiti State Polytechnic, Isan-Ekiti

Table 2: Extent of Reference Management Tools Awareness among Lecturers in Ekiti State Polytechnic, Isan-Ekiti

Researchers in Higher State Polytechnic, East Africa												
	VGE		GE		ME		RE		NA		Mea n	SD
	N	%	N	%	N	%	N	%	N	%		
Open Access Reference Managem ent Tools												
Jabref	0	0	16	37.2	5	11.6	10	23.3	12	27.9	2.58	1.258
Mendeley	10	23.3	8	18.6	2	4.7	9	20.9	14	32.6	2.79	1.627
Zotero	6	14	22	51.2	7	16.3	8	18.6	0	0	3.60	.955
Qiqqa	0	0	8	18.6	23	53.5	6	14	6	14	2.77	.922
Close Access												

Reference Management Tools												
Endnote	2	4.7	1 6	37. 2	6	14	1 0	23. 3	9	20. 9	2.81	1.27 7
Citavi	0	0	4	9.3	2 5	58. 1	6	14	8	18. 6	2.58	.906
Flowcite	0	0	1 2	27. 9	1 9	44. 2	4	9.3	8	18. 6	2.81	1.05 2
Bookends	0	0	1 6	37. 2	1 5	34. 9	4	9.3	8	18. 6	2.91	1.10 9
Paper pile	0	0	1 2	27. 9	1 9	44. 2	6	14	6	14	2.86	.990
Refworks	0	0	1 8	41. 9	1 1	25. 6	4	9.3	1 0	23. 3	2.86	1.20 7
Total												

Key=VGE=Very great extent, GE= Great extent, ME=Moderate extent, RE=some extent, NA=Not at all

On the extent of reference management tools awareness among lecturers in Ekiti State Polytechnic, Isan-Ekiti, concerning Open Access Reference Management Tools, Table 2 shows that, while the majority of respondents (65.2%) were aware of Zotero to a great and very great extent—that is, none of them was not aware of the software at all—only 14% of respondents were aware of the program to a very great extent—the extent of awareness mean for Zotero is 3.60. Additionally, Table 2 shows that concerning Mendeley, 41.9 per cent of respondents were aware of the program to a great and very great extent, and 32.6 per cent of respondents had no knowledge of the software at all. It was also shown that 23.3% of the participants had a very high level of familiarity with the Mendeley. Mendeley's awareness is 2.79 on average. This relatively high awareness suggests that Zotero may be more actively promoted, more user-friendly, or more compatible with the academic needs of the lecturers. The zero per cent of respondents are completely unaware of Zotero further suggests that Zotero may be a recommended or regularly discussed tool within the academic or research support environment at EKSPOLY.

Furthermore, under Close Access Reference Management Tools, Table 2 revealed that 37.2% of respondents were extremely familiar with Bookend, whereas none were very familiar with the tool. Table 2 further demonstrates that 18.6% were unaware of the Bookend reference management function at all. The average level of awareness for Bookend is 2.91. The chart also shows that 41.9%

of respondents were very aware of Refwork, while 23.3% were completely unaware. Furthermore, 27.9% of respondents were very aware of the Paperpile, whereas 14% were not. The frequency mean of Refwork and Paper pile is 2.86. This shows that the reference management tool with the highest mean of awareness was Zotero.

Research question two: What is the level of use of reference management tools among lecturers at Ekiti State Polytechnic, Isan-Ekiti?

Tables 3 and 4 showed the results on the level of use of reference management tools among lecturers in Ekiti State Polytechnic

Table 3: Level of Use of Reference Management Tools among Lecturers in Ekiti State Polytechnic, Isan-Ekiti

	VF N %		SF N %		O N %		R N %		N N %		Mea n	SD
Open Access Reference Manageme nt Tools												
Jabref	0	0	4	9.3	4	9.3	1 1	25. 6	2 4	55. 8	1.72	.984
Mendeley	1 2	27. 9	1 4	32. 6	3	7	1 2	27. 9	2	4.7	3.51	1.298
Zotero	0	0	1 2	27. 9	1 0	23. 3	2	4.7	1 9	44. 2	2.35	1.307
Qiqqa	0	0	6	14	8	18. 6	8	18. 6	2 1	48. 8	1.98	1.123
Close Access Reference Manageme nt Tools												
Endnote	0	0	9	20. 9	8	18. 6	1 4	32. 6	1 2	27. 9	2.33	1.107
Citavi	0	0	2	4.7	2	4.7	1 4	32. 6	2 5	58. 1	1.56	.796
Flowcite	0	0	4	9.3	6	14	8	18. 6	2 5	58. 1	1.74	1.026

Bookends	0	0	2	4.7	6	14	1 2	27. 9	2 3	53. 5	1.70	.887
Paper pile	0	0	2	4.7	2	4.7	1 2	27. 9	2 7	62. 8	1.51	.798
Refworks	2	4.7	4	9.3	8	18. 6	1 0	23. 3	1 9	44. 2	2.07	1.203
Total											20.4 7	10.52 9

Key=VF=Very Frequently, SF=Somewhat Frequently, O= Occasionally, R=Rarely, N=Never

Table 4: Interval Table for Level of Use of Reference Management Tools among the Respondents

Interval	Overall mean score image	Remark
0- 16.66	-	Low
16.67 – 33.32	20.47	Moderate
33.33 – 50		High

To find the level of use of reference management tools, a test of the norm was conducted. The overall mean of 20.47 falls between the scale “16.67 – 33.32” and this shows a moderate level of use of reference management tools by the lecturers in EKSPOLY.

Table 3 demonstrates that 60.5% of respondents used Mendeley regularly, 7% used it occasionally, and 4.7% never used it. According to this, the majority of respondents utilised Mendeley, although only slightly more than half of them did so regularly. At 3.51, Mendeley has the greatest mean frequency of usage. This high level of regular usage suggests that Mendeley may be the preferred reference management tool for these lecturers due to its practical features, user-friendly interface, or availability of institutional support for Mendeley. Furthermore, as the Table shows, 27.9% of the respondents used Zotero regularly, 23.3% used it occasionally, and 44.2% never used it. The majority of responders did not utilise Zotero, as seen by this. The average number of times that Zotero is used is 2.35. This discrepancy between awareness and usage suggests that even though lecturers know about Zotero, they may not perceive it as valuable or efficient for their needs compared to Mendeley. This could be due to specific features of Zotero that may not align with the user preferences or research workflows of these lecturers, or it may reflect limited encouragement or training for Zotero’s use within the institution.

Research question three: What are the benefits gained from the use of reference management tools among lecturers in Ekiti State Polytechnic?

Table 5 shows the results on the benefits of the use of reference management tools among lecturers in Ekiti State Polytechnic

Table 5: Benefits of Reference Management Tools among Lecturers in Ekiti State Polytechnic, Isan-Ekiti

	SA		A		D		SD		Mean	SD
	N	%	N	%	N	%	N	%		
It saves time	0	0	0	0	28	65.1	15	34.9	1.65	.482
Easy to cite/provide reference	0	0	0	0	28	65.1	15	34.9	1.65	4.82
Easy to generate a Bibliography	0	0	22	51.2	2	4.7	19	44.2	2.07	.985
Easy to download and Installation	0	0	22	51.2	4	9.3	17	39.5	2.12	.956
Free storage	0	0	20	46.5	2	4.7	21	48.8	1.98	.988
Total										

Key: SA=Sstrongly Agree; A= Agree; D= Disagree; SD= Strongly Disagree

The findings on benefits of reference management tools among lecturers in Ekiti State Polytechnic, Isan-Ekiti revealed that the lecturers of EKSPOLY find reference management tools easy to download and Install (mean=2.12) and generate a bibliography (mean=2.07) while the least benefits are that reference management tool saves time and easy to cite/provide a reference (mean 1.65). The findings suggest that while lecturers at EKSPOLY appreciate reference management tools for straightforward downloading, installation, and bibliography generation, they may lack sufficient training or familiarity with advanced features like time-saving functions and automated citation. The lower perceived benefit of time-saving and citation ease indicates the potential underutilization of these tools, which could be improved with targeted workshops or hands-on training sessions.

Research question four: What are the challenges associated with the use of reference management tools among lecturers in Ekiti State Polytechnic Lecturers?

Table 6 shows the results of the challenges of the use of reference management tools among lecturers at Ekiti State Polytechnic

Table 6: Challenges Associated with the Use of Reference Management Tools among Lecturers in Ekiti State Polytechnic, Isan-Ekiti

	SA		A		D		SD		Mean	SD
	N	%	N	%	N	%	N	%		
No Internet connection	0	0	8	18.6	19	44.2	16	37.2	1.81	.732
Unavailable power supply	6	14	3	7	12	27.9	22	51.2	1.84	1.067
No technical service support	0	0	6	14	9	20.9	28	65.1	1.49	.736
Lack of skills	2	4.7	8	18.6	6	14	27	62.8	1.65	.948
Time consuming	6	14	6	14	15	34.9	16	37.2	2.05	1.045
Insufficient training	0	0	0	0	12	27.9	31	72.1	1.28	.454
Software is too complex	8	18.6	13	30.2	18	41.9	2	4.7	2.77	.972
Lack of understanding of citation styles	0	0	4	9.3	18	41.9	21	48.8	1.60	.660
Difficult to install and add plugins	0	0	6	14	21	48.8	16	37.2	1.77	.684
I like to do it manually	12	27.9	4	9.3	17	39.5	10	23.3	2.42	1.139
Total										

Key: SA= Strongly agree; A= Agree; D= Disagree; SD= Strongly Disagree

The challenges associated with the use of reference management tools among lecturers in Ekiti State Polytechnic are the complexity of the software (mean=2.77), manual use of reference management tools (mean=2.42) and it is time-consuming (mean=2.05). The least challenges are insufficient training (1.28) and no technical service support (mean 1.49). This suggests that lecturers find reference management tools somewhat difficult to navigate, especially if they're performing tasks manually rather than taking advantage of automation features. This could be due to a lack of deep familiarity with the tools' advanced functionalities, making tasks appear more labor-intensive. Interestingly, insufficient training and lack of technical support are rated as lesser challenges, indicating that while basic support may be available, the training provided might not address the specific complexities lecturers encounter. More in-depth, practical training focused on advanced features could help mitigate these challenges.

Discussion of findings

The findings show that the Open Access Reference Management Tools the lecturers are aware of are Zotero and Mendeley while the Close Access Reference Management Tools are bookends, paper pile and refworks. This conforms with the findings of Mvula (2023) that university teachers are aware of reference management software such as Mendely, followed by Zotero and end note. This corroborates the work of Mahawar, Tanwar, and Hurum (2021) who found that the respondents were aware of Mendeley and Zotero which were frequently used among academicians.

The results showed a moderate level of use of reference management tools by the lecturers in EKSPOLY. The respondents indicated that they can use Mendeley, Zotero and Endnote. The study of Adeyemi, Akanbi and Sulaiman (2020) also confirms the study that revealed that the respondents to a great extent used Endnote, Mendeley and Zotero while the majority of them had never used a bulk of the reference management tools. The results is also consistent with Madhuri and Lakshmi (2021) who found that the majority of the research scholars in India used Mendeley, Zotero and Endnote to manage their references. This study affirms the findings of Bugyei, Kavi and Obeng-Korateng (2019) that Mendeley was the most popular software among researchers in Ghana. In the same vein, Klock, Nakazoni, Gasparini and Hounsell (2016) found that EndNote users had the highest completion rate of the task required. This may be a pointer to the common usage of EndNote among the faculty members.

The findings revealed that the respondents found reference management tools easy to download and Install and generate a bibliography. This conforms with the position of Borah, Husain, Saikia, and Nath (2022), who mentioned that academic writers use reference management software to create and utilize bibliographic citations. Likewise, Ijah, Anyiam and Baridam (2021) conform with the findings of this study positing that reference management tools make it simple to import from bibliographic databases as they generate a reference list in the chosen format automatically during article formation.

The challenges associated with the use of reference management tools are the complexity of the software, the manual method of using reference management tools and it is time-consuming. This affirms the finding of Mahawar, Tanwar, Hurum (2021) who mentioned that one of the challenges of using RMT is time-consuming. The position corroborates the studies of Ollé and Borrego (2010) who found that some of the barriers to using a reference manager include the time it would take to create the database and issues with citations needing modifications,

as well as interfaces that were not user-friendly (Randall et al., 2008; Wu & Chen, 2012). Also, the study of Lisbon (2017b) identified the complexity of formatting multilingual citations with reference management tools. The findings of this study agree with Speare, (2018) who revealed that respondents faced the challenges of complexity in the use of the software (such as difficulty of relocating information found, problems extracting correct metadata from PDFs, problems handling duplicates, and inaccurate citation styles), the usual manual method of managing references, and the time to organize their PDFs and references, challenges with changing styles and the time needed to create citations.

Conclusion and Recommendations

The findings indicate that there is a moderate awareness and level of use of reference management tools among EKSPOLY lecturers. Despite recognizing their importance, respondents face significant challenges in effectively utilizing these tools. The primary issues include the complexity of the software, the manual processes involved, and the considerable time investment required. These obstacles hinder the optimal adoption and utilization of reference management tools, thereby limiting their potential benefits in academic and professional settings. The study recommended that institutions should organize regular training sessions and workshops to enhance lecturers' proficiency with reference management tools, focusing on Mendeley, Zotero, and EndNote. This can address the challenges related to software complexity and improve efficiency. Integrate reference management tools with the institution's library services to facilitate easier importation of bibliographic data and seamless access to scholarly resources. Periodically review and update the reference management tools in use, based on user feedback, to ensure they meet the evolving needs of the lecturers and remain efficient and effective. Institutions should consider promoting and possibly investing in more user-friendly reference management tools or software enhancements that simplify citation management and metadata extraction. This can include intuitive design, clear instructions, and simplified navigation to make the software more accessible to users with varying levels of technical expertise. Providing users with strategies and tips for effective time management when using reference management tools can help mitigate the perception of time consumption. This can include guidance on organizing references, setting up templates, and utilizing shortcuts.

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