



Pelatihan Perangkat Lunak Manajemen Referensi Menggunakan Aplikasi Zotero di Kalangan Mahasiswa

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Abstrak

Dalam dunia akademik, keterampilan menulis karya ilmiah merupakan salah satu kemampuan penting yang harus dikuasai oleh mahasiswa. Salah satu komponen utama dalam penulisan akademik adalah penyusunan referensi dan bibliografi. Penelitian ini berfokus pada pemberian pelatihan kepada mahasiswa tentang cara menggunakan alat pengelola referensi, yaitu Zotero, untuk mendukung kualitas penulisan akademik mereka dengan mengadakan pelatihan untuk mahasiswa tingkat universitas pada tahun pertama studi mereka. Pengabdian ini dilakukan di sebuah asrama yang dikembangkan oleh salah satu universitas di Bandung. Peserta penelitian ini adalah 21 mahasiswa dari berbagai jurusan. Setelah mengikuti kegiatan ini, mahasiswa diminta untuk mengisi formulir evaluasi untuk mendapatkan masukan mengenai pelatihan dalam bentuk kuisisioner. Hasil dari kuisisioner dihitung secara manual menggunakan metode analisis kualitatif sederhana untuk menginterpretasikan respon peserta. Hasilnya menunjukkan bahwa mahasiswa memberikan respon positif terhadap pelatihan ini. Hal ini dapat dilihat dari semua indikator dalam kuisisioner yang mendapatkan hasil tinggi, termasuk pemahaman materi, keterampilan praktis, dan kepuasan mereka terhadap penyelenggaraan acara pelatihan. Dengan demikian, diharapkan mahasiswa akan semakin terbiasa menggunakan teknologi untuk meningkatkan kualitas penulisan akademik mereka.

Kata Kunci: pengelola referensi, alat pengelola referensi, Zotero

Abstract

In the academic world, the skill of writing scientific papers is one of the important abilities that students must master. One of the main components in academic writing is the preparation of references and bibliography. This study focuses on giving students' training on how to use reference management software, namely Zotero, to support their quality of academic writing by conducting a training to students at university level in their first year of study. This study was conducted in a dormitory developed by one of universities in Bandung. The participants of this study were 21 students from different majors. After participating in this activity, students were asked to fill out an evaluation form to get input regarding the training in the form of questionnaire. The results from the questionnaire were calculated manually using a simple qualitative analysis method to interpret the participants' responses. The results showed that the students provided positive responses to this training. It can be seen from all the indicators in the questionnaire, which got high scores, including material understanding, practical skills, and their satisfaction with the organization of the training event. In this way, it is expected that students will become increasingly accustomed to using technology to enhance the quality of their academic writing.

Keywords: reference management, reference management software, Zotero.

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INTRODUCTION

In the academic world, the skill of writing scientific papers is one of the important abilities that students must master. One of the main components in academic writing is the preparation of references and bibliography in accordance with scientific principles (Rusli et al., 2023). Unfortunately, many students still experience difficulties in managing references systematically, both in searching, storing and compiling correct quotations. Errors in writing citations not only have an impact on the quality of scientific work (Haris et al., 2023), but can also pose a risk of violating academic ethics such as plagiarism (Widiyastuti et al., 2023).

As technology develops, there is various software that can help manage references efficiently, such as Mendeley (Widianingsih et al., 2023) and Zotero. This training focuses on Zotero application. Zotero is an open-source reference management application that allows users to collect, organize and create citations automatically according to various international citation formats such as APA, MLA or Chicago (Kristyanto, 2023). Even though Zotero offers practical solutions, many students do not know or understand how to use it optimally. In practice, many students face various obstacles related to reference management. Problems that often arise include:

Lack of Knowledge of Reference Management Software: Most students still use manual methods in managing references, which often results in errors in formatting and non-compliance with citation guidelines.

Minimal Use of Technology in Academic Writing: Students tend not to be accustomed to using software such as Zotero to support productivity in compiling scientific work, even though this technology is available.

Time and Efficiency Constraints: Manually compiling a bibliography takes a long time, especially for scientific works with many references. This often becomes an obstacle for students, especially in completing final assignments or research.

Lack of Formal Training: Not many educational institutions specifically provide training in using Zotero or other reference management software, so students do not have adequate guidance to utilize these applications.

Seeing these problems, structured and applicable training is needed to help students understand and utilize Zotero in academic writing. This training aims to improve students' skills in managing references efficiently, reducing the risk of citation errors, and maximizing productivity in completing scientific work. Zotero training is also in line with efforts to increase students' digital literacy, which is an important competency in the current technological era.

METHOD

This study was conducted in a student dormitory developed by one of the state universities in Bandung. The dormitory houses many students from various majors, all of whom are in their first year of study. As first-year university students, they are still transitioning from high school life to university life, which

requires them to adapt to academic tasks, including those related to academic writing. This condition is suitable for this study, as it aims to provide knowledge on improving students' writing quality, particularly through the use of a reference manager, namely Zotero.

The object of this study was 21 students from the dormitory, who were selected based on a purposive sampling technique to ensure they met specific criteria relevant to the research objectives.

Carrying out training on using Zotero for students requires a structured approach so that the training runs effectively and participants can understand and practice the material in appropriate way. It consisted of several stages: preparation, implementation, evaluation and discussion, and closing.

This community service study produced several qualitative findings obtained from the questionnaire results. The questionnaire was distributed after the training was completed to gather students' feedback on using Zotero. Items 1–2 address students' prior experience, items 3–5 focus on the materials, items 6–9 pertain to practical skills, and item 10 evaluates overall satisfaction. The results from the questionnaire were calculated manually using a simple qualitative analysis method to interpret the participants' responses.

By implementing those steps, it is expected that students not only understand how to use Zotero but also motivated to apply it in their academic writing.

FINDINGS AND DISCUSSIONS

The results of this study were formulated into two types, namely: description of training activities and questionnaire results. However, the presentation of the findings is first started with the description of training activities in detail and supported by the result from the questionnaire. Since the questionnaire aimed to provide students' experiences after participating in this activity, it could offer a true picture of how the students perceived the training and their ability to apply the knowledge gained, particularly in using Zotero for academic purposes. This activity was carried out through several stages, namely: preparation, implementation, evaluation and discussion, and closing. The detailed steps of the training implementation are explained below.

Preparation: The first step that conducted was need analysis, it is to identify students' level of knowledge regarding reference management and their specific needs in academic writing. They were students in the first level of their study who are still in the transition high school's life to university life (Kantanis, 2000) which force them to read more literature review to improve their writing quality. Moreover Perry & Allard (2003) mentioned that they still did not feel well prepared for university study, however, the possibility of their familiarity with Zotero is low. This was also proven by the result from questionnaire that most of them (more than 90%) have no idea on how to use Zotero.

Another preparation stage was to ensure the availability of supporting materials and tools, which include preparing presentation materials,

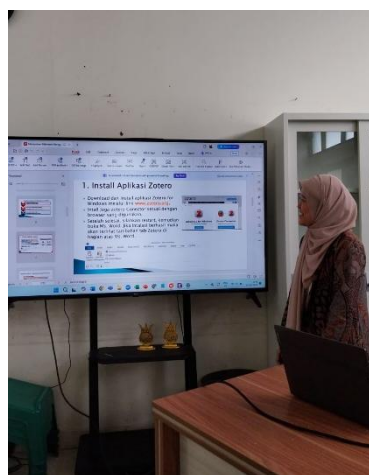
step-by-step guides, and a simulation of using Zotero. Also make sure that the training room has facilities such as computers, projectors and a stable internet connection. Fortunately, the room was not equipped with computer facilities, however, students were required to bring their laptops, as the training involved hands-on practice in using Zotero.



Picture 1. Students with their laptops

Implementation: The upcoming stage was to introduce the training objectives, the benefits of Zotero in reference management, and the importance of citation management in scientific work. Additionally, give students motivation to provide concrete examples of how Zotero can save time and reduce errors in writing references. An introduction to Zotero consists of explaining the main functions of Zotero, such as collecting references, organizing and automatically generating citations. Demonstrate the Zotero interface and key functions such as Libraries, Collections, Tagging, and Plugins for integration with word processors. Hands-on Practice guides for students to install Zotero, set up a Zotero

account for cloud sync, and install browser plugins and add-ons in a word processor, teaching how to add references manually and automatically via website, DOI, or ISBN. Demonstrate how to create folders, add tags, and search for specific references in Zotero libraries. Show the steps to insert citations and create an automatic bibliography in Microsoft Word or Google Docs.



Picture 2. Explaining hands-on practice guides to install Zotero

Evaluation and Discussion: Provide simple tasks such as searching for journal articles, importing them into Zotero, and creating a bibliography based on a specific format (for example APA or MLA). Supervise participants during practice and help if there are difficulties. Ask questions to test participants' understanding, such as how to update references or resolve plugin errors. Additionally, encourage participants to share challenges they encounter and discuss solutions together.

Closing: Summarize the important points of the training and ask participants to fill out an evaluation form to get input regarding the training.

This evaluation form is a questionnaire consisting of 10 questions. Below is the result from the questionnaire:

Tabel 1. Questionnaire Results

| No | Item | Indicator | Percentage |
|----|------|------------------|------------|
| 1 | 1-2 | Prior experience | 91.7% |
| 2 | 3-5 | Material | 85.6% |
| | | Understanding | |
| 3 | 6-9 | Practical Skills | 90% |
| 4 | 10 | Satisfactions | 89% |

From the table above, it can be concluded that before participating in this activity most of students have no basic understanding of Zotero usage. For less than 10% students who were not included into the percentages were actually students who have ever heard Zotero but never used it in practice. They were stated this statement in the discussion session before the material explained. This findings is similar with the finding from Budiarta & Gaho (2021) saying that students' familiarity of reference manger in academic writing was low. However, they suggest that training on how to use reference manager like Zotero should start from the first year in order to build students' skills early on and improve their academic writing efficiency throughout their studies.

The next finding is related to the students' understanding of the materials which have been given in this activity. The result showed that 85.6% gave positive response which means that most of them have already understood on how to use Zotero to support their academic writing. Not only from the result of questionnaire response but also it can be seen from their response during the

training was held. They show their enthusiasm to follow each step given by the presenter. This finding was supported by the next indicator, it is practical skills which resulted a positive response too. This was demonstrated by 90% of students who were willing to use Zotero as management tool in their academic writing after participating in this activity (Item: 6-8). Besides, they also perceived that it could help them improving the quality of their academic writing (Item: 10). This is in line with Hasan & Habibie (2023) and Supriyadi et al. (2020) who stated that this software is beneficial for improving students' academic process to produce a god quality of their academic writing.

Seeing the positive response from the students, it is expected that this activity will motivate them to use technology to support their academic achievement particularly to use Zotero to organize their references and enhance the quality of their academic writing.

The completion of all the stages mentioned above marks the end of the Zotero training session. Below are the documentation data along with the dormitory management.



Picture 3. Documentation

CONCLUSION

This community service activity successfully achieved its goal of enhancing students' understanding of the importance of using reference managers in academic writing, particularly in managing references effectively and efficiently using Zotero. It is hoped that, through this training, students will be able to utilize technology to support the quality of their written work and improve their writing skills in a more systematic manner.

The students provided positive responses on all the indicators in the questionnaire, including understanding the material, practical skills, and

their satisfaction with the organization of the training event. This shows that the training was conducted successfully and had a positive impact on students' ability to use Zotero as a tool for academic writing. Students feel more prepared and confident in managing references and improving the quality of their written work in the future. Students and teachers are expected to continue utilizing Zotero in their daily academic activities, as well as encourage the use of other technologies to improve the efficiency and quality of academic writing in the future. Since teachers play a crucial role in guiding students to integrate technology into the learning process, it is hoped that they will provide continuous support and guidance in utilizing Zotero and other software. In this way, it is expected that students will become increasingly accustomed to using technology to enhance the quality of their academic writing.

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