

Improving The Quality of Scientific Works Through the Use of Flipbook- Based Mendeley Guidelines for Students of Business Administration Department of Semarang State Polytechnic

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Abstract

Scientific work is a writing or research conducted as part of the academic tasks of academicians, including students. In the process of writing this scientific work, there is an unavoidable risk of plagiarism, whether intentional or unintentional. Writing quality scientific work requires the ability to select and compile a bibliography used as a reference, as well as skills in making accurate citations. Initial studies found that scientific work in the form of Final Projects and Theses produced by students of the Business Administration Department of Semarang State Polytechnic could not be said to be quality scientific work. The concept of a Flipbook-based Mendeley guidebook that the research team adopted in this study was considered to make it easier and more interesting for readers to use the book. The results of the study showed the highest increase of 49.1%, which indicates that the effectiveness of this guidebook has been proven to help students in implementing technical steps for writing citations that have an impact on improving the quality of scientific work.



Keywords: Scientific Paper, Mendeley, Flipbook

INTRODUCTION

Research on improving the quality of scientific papers is an academic study that focuses on developing strategies, methods, and approaches to improve the quality of scientific papers produced by students, lecturers, or researchers. This study focuses on final year students' compliance with publication ethics, including efforts to avoid plagiarism and increase originality in writing. The use of technology and reference sources, such as reference management software and access to reputable journals, also plays an important role in improving the quality of scientific papers.

Scientific papers are writings or research conducted as part of the academic tasks of academics, including students. This work generally involves in-depth exploration of a particular topic with the aim of producing new knowledge or providing a deeper understanding of an issue. The same thing was expressed by (Kasim, Fitriani, & Nurul, 2023) that scientific papers are writings that are compiled by following scientific principles, so that they have certain differences from other general writings. The rules applied in the compilation process become a special identity and certain standards that are used as guidelines in evaluating the quality of a scientific paper.

The rapid advancement of technology and information has had a significant impact on various aspects of life, including greatly influencing the progress of academic studies, research activities, and the writing of scientific papers by academic communities. This phenomenon can be observed through the increasing number of electronic scientific publications (e-resources) that are accessible online, enabling the dissemination of scientific information worldwide at a much faster rate. An academic publication not only gains numerous citations from other authors through its quality but also needs to be supported by the ability to be indexed by search engines. This ease of tracking can be achieved through proper referencing according to established standards.

In academic writing, there is a segment that draws inspiration from the ideas, arguments, analyses, or research findings of others, known as citations. The primary function of citations is to provide support for the arguments and analyses presented. Citation sources can come from various media, including textbooks and audiovisual materials, both in print and online formats, and can include both published and unpublished documents.

All types of documents can be significant contributors to the construction of a scientific paper by supporting the ideas and arguments presented. However, when using the ideas,



arguments, citations, or research findings of others, authors have the obligation to clearly indicate the sources within the text and in detail in the bibliography. The purposes of citation sources and bibliographies are: a) To prevent plagiarism: citations not only serve to reinforce or support the scientific work but also act as a preventive measure against plagiarism; b) To respect previous contributors: through citations, the author of the scientific work acknowledges the contributions of prior authors; and c) To assist readers: by providing guidance to readers who wish to explore further, detailing information in the bibliography allows readers to track citation sources for a deeper understanding.

The process of writing scientific papers carries the risk of plagiarism, whether intentional or unintentional. Writing a quality scientific paper requires the ability to select and compile a bibliography used as references, as well as skills in making accurate citations. The use of Mendeley software can help address these issues (Arizal, Listihana, & Kuning, 2018).

An initial study revealed that the scientific papers in the form of Final Projects and Theses produced by students of the Business Administration Department at Semarang State Polytechnic cannot be considered as high-quality scientific works. This is due to the students' lack of ability to properly construct accurate citations and bibliographies. It was found that in these students' scientific papers, several citations were missing from the bibliography. Additionally, some sentences in the papers were unintentionally flagged as plagiarized because the students did not include proper citations.

The use of Mendeley software can provide significant assistance in addressing the issues described above. Furthermore, Mendeley can save time that is typically required for the citation process. Mendeley also plays a key role in preventing unintentional plagiarism. Therefore, this research is crucial for improving the quality of students' scientific papers, particularly in the area of reference management, which can ultimately enhance the impact and traceability of academic publications.

Furthermore, Flipbook is a three-dimensional digital book that can contain text, images, videos, music or songs, and animations. The concept of a Mendeley guidebook based on Flipbook, introduced in this study by the research team, was chosen to make it easier and more engaging for readers to use the book. This, in turn, is expected to have a positive impact on the improvement of the quality of scientific papers produced by students of the Business Administration Department at Semarang State Polytechnic.

Previous research by Arizal et al., (2018), Ginanjar (2018), Kasim et al., (2023), and Ni'am (2023) indicates that the use of Mendeley software positively impacts an individual's writing skills,



particularly when citing sources. The distinction of this study lies in the use of the Flipbook concept to create the Mendeley guidebook. This approach is intended to make the learning process more attractive and accessible to millennial students, enabling them to better understand the proper citation practices, which will ultimately enhance the quality of their scientific work (Final Projects or Theses).

These expert opinions and observed phenomena serve as the foundation for this research, where the researcher seeks to document the use of Mendeley software in writing scientific papers by students. Therefore, the researcher is interested in conducting a study titled "Improving the Quality of Scientific Papers through the Use of a Flipbook-Based Mendeley Guidebook for Students of the Business Administration Department at Semarang State Polytechnic."

RESEARCH PROBLEM

Based on the background description above, the research problems of this study are as follows:

1. How can the Flipbook-based Mendeley guidebook be designed to meet the needs of students in the Business Administration Department at Semarang State Polytechnic?
2. How can the Flipbook-based Mendeley guidebook be developed for students in the Business Administration Department at Semarang State Polytechnic?
3. How effective is the Flipbook-based Mendeley guidebook in enhancing the quality of scientific papers produced by students in the Business Administration Department at Semarang State Polytechnic?

SCIENTIFIC PAPER

A scientific paper is a combination of two words, "karya" (work) and "ilmiah" (scientific). According to the Great Dictionary of the Indonesian Language (KBBI), "karya" is defined as the result of an activity, whether in the form of actions, creations, or creative products, especially in writing or compositions. Meanwhile, "ilmiah" describes a characteristic based on scientific knowledge, adhering to scientific principles, and rooted in systematic and measurable scientific methods.

Rahim (2020) states that a scientific paper is a written work containing ideas, explanations, or solutions to a problem in a structured manner. This writing is composed with an objective and honest approach, using formal language, and supported by relevant facts, theories, and/or empirical evidence. Scientific papers are an integral part of the student learning process. Types of



scientific papers include essays, research reports, final assignments, theses, and others. However, scientific papers are often seen as a daunting challenge for final-year students (Safitri et al., 2021).

Scientific papers, particularly final assignments and theses, are an important requirement for student graduation, making a good understanding of them necessary. However, the reality on the ground shows that the lack of understanding among students regarding final assignments or theses often leads to problems, which ultimately affects the quality of the scientific papers produced. Therefore, a scientific paper can be defined as a written work composed based on scientific principles and supported by relevant observations and previous research. One example of a scientific paper is the thesis and final assignment written by students in the Business Administration Department.

MENDELEY

Mendeley is a reference management software designed to make it easier for writers to organize citations and bibliographies in various scientific papers, such as articles, final assignments, theses, dissertations, and others. The usefulness of Mendeley for writers is significant, as stated by (Ginanjari, 2018). This Mendeley application serves as a solution that integrates the "citation and reference manager" function with an academic social network, providing convenience in inserting, writing, and formatting citations efficiently. Salim & Purnamasari (2022) emphasize that every scientific paper requires citations that serve as a basis to strengthen arguments and research analysis. Citations and bibliographies can now be written more integrated with the help of software like Mendeley, which supports the management of reference files in PDF format with organized metadata, making it easier to search documents. In addition, Mendeley allows users to organize research, collaborate online with fellow academics, and access the latest scientific publications.

FLIPBOOK

According to Asrial, Syahrial, Kurniawan, & Anandari (2020), flipbook media is a digital book resembling an album containing learning materials. The advantage of flipbooks compared to other learning media lies in their ability to present not only text but also various interactive elements such as images, videos, audio, links, and so on (Kodi, Hudha, & Ayu, 2019). The function of using learning media is to create variation in learning so that students do not get bored (Hamid & Alberida, 2021). Thus, it can be concluded that a flipbook is a digital learning medium that resembles an interactive book with an attractive display. Its advantage lies in its ability to combine



text, images, videos, audio, and links, making learning more dynamic and easier to understand. These interactive features make the flipbook not only a source of information but also a tool to increase student engagement and motivation in learning.

RESEARCH METHODS

This study is a development research that employs a qualitative approach, complemented by quantitative data to strengthen the analysis. The development model implemented is based on the Dick & Carey model (Sanjaya, 2011:75), which emphasizes the systematic achievement of learning objectives. The product development process is carried out through five main stages: (1) preparation phase, (2) drafting the initial product, (3) initial product evaluation, (4) product testing, and (5) product revision. From the application of this model, a more structured and systematic development procedure is designed. A detailed description of this procedure is presented in Figure 1.

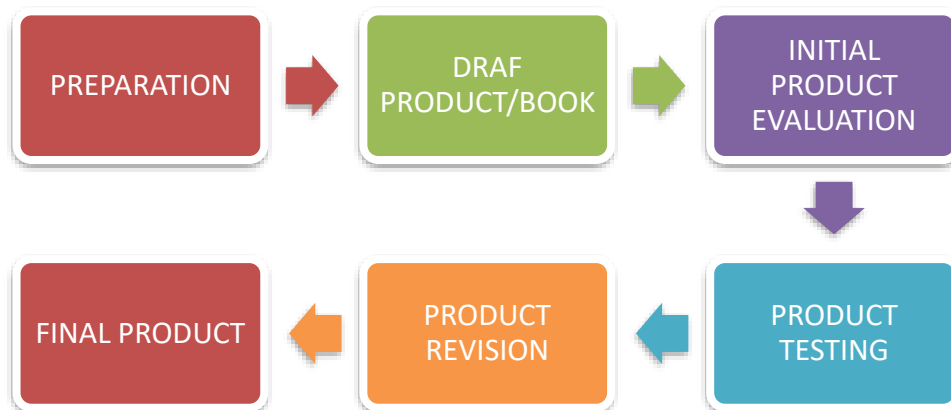


Figure 1 Modified development procedure from Dick & Carrey

POPULATION AND SAMPLE

The population of this study was all students of the Business Administration Department of Semarang State Polytechnic. The number of samples in this study was 100 samples from 4 different study programs. Each study program had 25 samples.

RESULTS AND DISCUSSION

The product development procedure in this study was carried out through five stages: 1) preparation stage, 2) product drafting stage, 3) initial product evaluation stage, 4) product trial stage, and 5) product revision stage. The following is a description of each stage.

Stage 1: Preparation

The preparation stage was carried out to obtain information on the extent to which the need for a Flipbook-based Mendeley guidebook for students of the Business Administration Department of Semarang State Polytechnic. Data were taken from the results of group discussions of the research team and the results of a survey in the form of a questionnaire that had been distributed to students of the Business Administration Department by the implementing team.

The results of group discussions and surveys conducted through questionnaire completion indicate that almost all students in the Business Administration Department require a Mendeley-based Flipbook guidebook to enhance the quality of their scientific work. The detailed results of the initial survey are presented in Figures 2 and 3.

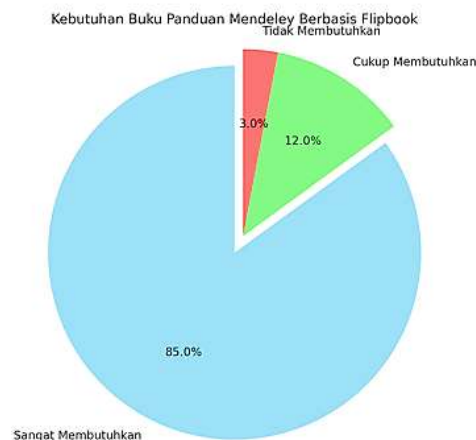


Figure 2 Initial Survey on the Need for a Guidebook

In addition to the initial survey, the research team also distributed a questionnaire to final-year students of the Business Administration Department with the aim of determining (1) a Mendeley-based Flipbook guidebook that aligns with the characteristics of the target book users, and (2) a Mendeley-based Flipbook guidebook that is in accordance with technological advancements. The results of the questionnaire are presented in Figure 3.

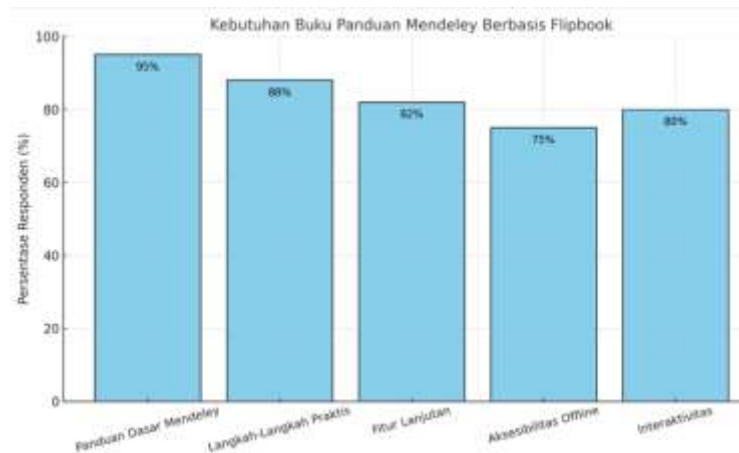


Figure 3 Product Development of the Guidebook According to User Needs and Characteristics

Based on Figure 3, it shows the development of a guidebook product according to the needs and characteristics of users. As many as 95% of respondents need material related to the "Mendeley Basic Guide" using clear and easy-to-understand language. As many as 88% of respondents need an explanation related to "Practical Steps". The practical steps referred to here start from installing Mendeley to using it to improve the quality of scientific work. As many as 82% of respondents need advanced features that can facilitate the use of this guidebook. The research team implemented this by using a flipbook application with a 3-dimensional concept. As many as 75% of respondents needed offline accessibility. As many as 80% of respondents needed interactivity in using the book. The research team realized this by adding images, sound effects, and background effects of running clouds so that users do not get bored reading it. Users can pretend to really be reading a book because there are sound effects when turning the next or previous page.

Stage II: Preparation of Product Draft

In the product draft preparation stage, the research team prepared a product draft according to the survey results in the previous stage. The preparation of the book draft is documented and presented in Figure 4.



Figure 4 Drafting Stage of the "Mendeley Guidebook" Product by the Research Team

Stage III: Initial Product Evaluation

In the initial product evaluation stage, the research team collectively conducted a review of the "Mendeley Guidebook" that had been developed. This stage also involved the Head of the Business Administration Department, Dr. Dody Setiadi, S.E., MSi., to carry out an expert evaluation. This stage is documented and presented in Figure 5



Figure 5 Initial Product Evaluation Stage

Stage IV: Product Testing

Product testing was conducted on the target users, which were final-year students of the Business Administration Department at Semarang State Polytechnic, representing four different study programs. Each study program involved 25 students, making a total of 100 students participating in this stage. The students were asked to read and apply the Mendeley guidebook (the product developed) with guidance from the research team. This process is documented as shown in Figure 6.



Figure 6 Product Testing Stage with Users

Stage V: Revision

The final stage was product revision. After the initial product evaluation and product testing, several suggestions for improvement or revision were identified. After the product revisions, the final product of this research was successfully achieved by the research team. Several suggestions and improvements to the product are presented in Table 1.

Table 1 Suggestions and Product Improvements for the Mendeley Guidebook

Aspect	Suggestion	Improvement
Flipbook Design	The design seemed unattractive and monotonous.	Added interactive visual elements like illustrations, icons, and appealing colors.
Installation and Basic Usage Guide	No detailed Mendeley installation guide.	Added a step-by-step guide for installing Mendeley on various platforms.
Language and Material Delivery	The language was too technical and difficult for new students to understand.	Used simpler, clearer language with practical examples in images that assist in every stage of Mendeley usage.

Based on Table 1, the research team made improvements to the "Mendeley Flipbook Guidebook for Business Administration Students at Semarang State Polytechnic." The final product of this research can be accessed here: <https://online.fliphtml5.com/yuctg/ddzs/>.



Figure 7 Final Product of the Research

EFFECTIVENESS OF THE MENDELEY FLIPBOOK GUIDEBOOK

The research results indicate that the "Mendeley Flipbook Guidebook" for students of the Business Administration Department at Semarang State Polytechnic has proven effective in enhancing the quality of scientific work. Data were collected from pre-test and post-test results of students using the guidebook during the product launch activity. In this event, the research team also provided training and assistance to final-year students in applying the guidebook. The results of the statistical test are presented in Table 2.

Table 2 Results of Pre-test and Post-test Score Differences

Assessment Aspect	Average Pre-test	Average Post-test	Difference (Δ)	Improvement (%)
Reference Management Understanding	60	85	25	41.7%
Citation Writing	55	82	27	49.1%
Bibliography Formatting	62	88	26	41.9%
Use of Mendeley Features	58	84	26	44.8%
Writing Efficiency	57	83	26	45.6%

Table 2 indicates the following points:

1. **Significant Improvement:** The average scores across all aspects showed significant improvement, with an average score difference of 25.2 points (41.7% improvement).

2. **Effectiveness of the Mendeley Flipbook Guidebook:** The "Citation Writing" aspect showed the highest improvement at 49.1%, indicating that the guidebook effectively helped students in applying technical steps for writing citations.
3. **Efficiency and Understanding:** The "Writing Efficiency" aspect increased by 45.6%, showing that the Mendeley Flipbook Guidebook helped students work faster and more efficiently compared to manual methods.

The use of the Mendeley guidebook in the flipbook format has proven to enhance the quality of students' scientific work due to the inclusion of 3D concept images with explanations that make it easier for students to apply Mendeley. Additionally, the flipbook guidebook format is considered more effective and efficient, as students can access it anytime and anywhere according to their needs and opportunities. This statement was derived from the questionnaire responses provided by Business Administration students after using the "Mendeley Flipbook Guidebook."

Thus, it can be concluded that the research titled "Improving the Quality of Scientific Work through the Use of the Mendeley Flipbook Guidebook for Business Administration Students at Semarang State Polytechnic" is proven to be effective. Furthermore, this research demonstrates that using a flipbook-based guidebook is an effective learning tool in the 4.0 era that aligns with the needs and characteristics of students.

CONCLUSION

Based on the research conducted, it can be concluded that the effectiveness of the Mendeley Flipbook Guidebook for Business Administration students at Semarang State Polytechnic shows the highest improvement of 49.1%, indicating that this guidebook effectively helps students apply the technical steps of writing citations, which has an impact on the improvement of the quality of scientific work.

FUTURE DIRECTIONS

Recommendations for further research include the development of a guidebook or similar using the flipbook application. In addition to the flipbook application being free and easy to use, it has been proven to improve the quality of learning.



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