



Improving Mastery of "Mendeley" Information Technology to Write Scientific Articles for Vocational School Teachers in Semarang

Readiness of Technical Education and Training

Ulfah Mediaty Arief^{1*}, Indah Novi Yarman¹, Rizal Anas Khasbullah¹, Muhammad Naufal Farras¹, Fitria Ekarini¹, Anan Nugroho¹, Naufal Baihaqi Al Afkar²

¹Department of Electrical Engineering, Faculty of Engineering, Semarang State University, Indonesia

²School of Mechanical Engineering, Faculty of Science, Engineering and Technology, The University of Adelaide, Australia

*E-mail: ulfahmediatyrief@mail.unnes.ac.id

ABSTRACT

One of the parameters of a teacher's professionalism is that he already has an educator certification. Since the Regulation of the State Minister for Empowerment of State Apparatus and Bureaucratic Reform (PERMENPAN RB) Number 16 Year 2009 concerning Functional Positions and Teacher Credit Scores, the application for promotion of a teacher requires the publication of scientific works or other innovative works as a form of increasing professionalism. Vocational teachers are one educational practitioner who can carry out research activities or research and experiments with their students. This research activity will bring up new ideas, in the form of concepts, inspirational ideas and educational works, all of which can be written in the form of scientific articles. Scientific articles are written information or written reports that describe the results of research or study or synthesize a problem by a person or a team by fulfilling scientific rules and ethics that are confirmed and adhered to by the scientific community. The results of written works in the form of scientific articles published by teachers are still lacking. Management of references sourced from books or journals can be done with the help of several available software. Software such as Mendeley can be used to help write websites, allowing authors to process the references they have. This activity aims to provide solutions for teachers in the form of training in writing scientific papers by scientific principles and management of references using Mendeley for vocational teachers so that they can be published in accredited national journals and international journals.

Keywords: *Scholarly Articles, Training, Mendeley, References*

1. INTRODUCTION

1.1. Situation Analysis

Based on Law Number 14 of 2005 concerning Teachers and Lecturers, a teacher must have an educator certification as one of the academic qualifications to realize national education goals [1]. The existence of a professional allowance provided by the government for educators certified teachers aims to increase professionalism [2]. One of the parameters of teacher professionalism is by publishing scientific articles. According to the Regulation of the Minister of State for Administrative Reform and Bureaucratic Reform

(PERMENPAN RB) Number 16 of 2009 concerning Functional Positions and Teacher Credit Scores, applying for a teacher's promotion requires the publication of scientific works or other innovative works as a form of increasing professionalism [3].

It has now been 7 years since 2013, so the demand for the publication of innovative scientific work for a teacher is commonplace and not new anymore. From the stages of elementary, middle and high school education, vocational teachers are the education practitioners who are most active in practice, research and experimental activities with their students. So that there are many contextual ideas, inspirational ideas and new educative works produced by Vocational School Teachers. New

ideas, concepts, inspirational ideas and educational works. This condition is very unfortunate. On the other hand, many scientific journals managed by tertiary institutions lack scientific articles so that they can be published according to their regular schedule. Scientific journals will accommodate scientific articles from various circles of intellectuals and educators, including vocational teachers. These journals publish scientific articles according to a certain scope of discussion.

A scientific article in a journal is written information that describes the results of the study of a problem by fulfilling the scientific rules and ethics applied by the scientific community. This is intended so that the published articles are of high quality, understand the reader and can be justified if quoted [4]. So that the rules and guidelines for writing journals are skills that must be possessed by vocational teachers who will publish their scientific article works.

1.2. Partner Problems

1.2.1. Lack of Knowledge and Skills in Writing Scientific Articles

Writing scientific articles requires sufficient skills and knowledge of literature review [5]. Some of the SMK teachers who do not yet have this ability will have difficulty presenting the results of the research they have done. In addition, the articles that are made will be difficult for readers to understand. This can be caused by a lack of sufficient literature reviews to support research and the use of writing techniques that are deemed inappropriate for presenting the results of research in a scientific article [6]. Even though it could be that the discussion raised in the research was quite significant and weighty, but because it was not presented properly, the reader's level of trust was reduced so that in quoting the article [7].

In general, one indication of quality writing is related to elements of plagiarism that often occurs due to a person's lack of knowledge about citation techniques or how to do citations [8]. Therefore, teachers and students in particular must be equipped with knowledge about how to do good citations to produce good and quality scientific work for publication in national or international journals. Meanwhile, from the various types of references that are currently very easy to find, students must have a good ability to search, find and then determine the right and appropriate references to use in writing their thesis/ final project/ scientific work [7]. Because this is also one of the important points in assessing the quality of scientific work. As was done by Kosasi, it is no less important regarding the management of article references from various scientific journals that must be carried out by students [9].

1.2.2. There has never been socialization about managing references using an application Mendeley

Managing references sourced from books or journals, can be done with the help of several available software, such as Mendeley, Endnote, Zotero and others [10]. The existence of software such as Mendeley that can be used to help write citations allows writers to process the reference documents they have [11]. Mendeley is an application developed by "Gregor Mendel" and "Dmitri Mendeleyev" where this application was launched by Mendeley Ltd to make it easier for writers to manage references or literature [12]. By using Mendeley students can easily manage writing references. As a reference manager, students can record the information of each reference source file into Mendeley once, then just call/refer to the reference many times in body writing.

2. RESEARCH METHOD

Implementation of Readiness of Technical Education and Training can take the form of non-formal education activities within the framework of continuing education. Implementation can be carried out in various types, both certified and non-certified. Types of community service education programs include arrangements, workshops, courses, counseling, campaigns, publications, projects, demonstrations, and demonstrations such exhibitions.

The implementation method contains an explanation of the stages or steps used to solve problems or describe the solutions offered to overcome community (partner) problems including the language used, tools, evaluation and statistics to analyze data. Paragraph writing. This section is written as much as a maximum of 10% of the article body.

3. RESULTS AND DISCUSSION

Implementation of Readiness of Technical Education and Training with a Training activity program to Improve Mastery of Information Technology and Writing Techniques of Scientific Articles Based on Literature Studies for SMK Teachers in Semarang City was carried out on June 20 2022 and was attended by 51 Teachers at SMK Negeri 1 Semarang and representatives of SMK Teachers around the city of Semarang.



Figure 1. The initial meeting of the team with partners at SMKN 1 Semarang

Writing scientific articles requires skills and knowledge of literature review. The use of literature review is used as a presentation of the results of research conducted to make it easier for readers to understand and support the results of the research. However, if a study is not completed with a literature review that is presented correctly, the reader's level of trust is reduced, so they are hesitant to cite the article. This makes other researchers reluctant to accept the article because the contents of the article are fully the responsibility of the author, which should have a literature review that supports the research.



Figure 2. Community team discussion with SMKN 1 Semarang partners



Figure 3. Photo with team and Semarang City Vocational School Teachers

The implementation of community service activities is carried out in 3 stages, the first is field preparation. At this stage coordination was carried out with the Principal and the management of SMK Negeri 1 Semarang as the host. This activity was carried out to ensure that community service activities in the form of scientific article writing workshops were needed by SMK teachers who were invited to SMK Negeri 1 Semarang. The next stage is the presentation of reference management workshop material using information technology by resource persons. Then it will proceed with the mentoring stage. Mentoring activities from the teacher service team begin with the provision of reference material until the scientific articles written are ready and worthy of publication in the *Edu ElektriKa Journal*.



Figure 4. Opening of the training by the leader of the team

In the training on the use of information technology, literature reviews will also convey that scientific articles are written information that describes the results of the study of a problem by fulfilling the applicable scientific rules and ethics. This is intended so that the published articles are of high quality, understand the readers and can be justified for their truth. So that the rules and guidelines for writing journals are skills that must be possessed by SMK teachers who want to publish their scientific article works.



Figure 5. Giving material by the first resource person

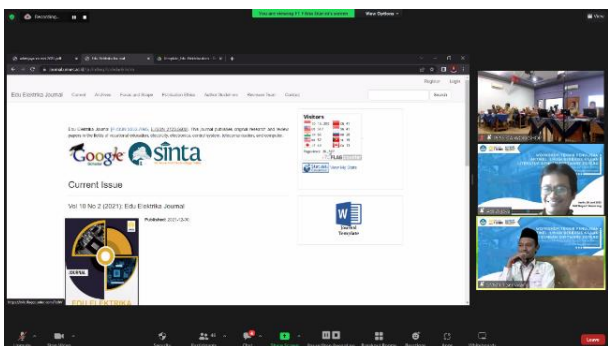


Figure 6. Giving material by the second resource person

The training activities take place in a hybrid manner, where the first resource person is shown in the online Zoom Meeting media image with the training participants in different rooms. In Figure 6 it is also shown that the resource person also used Zoom Meeting as a presentation medium and communication medium with the first resource person in answering and resolving questions given by the training participants regarding the material provided.



Figure 7. Training participants ask questions regarding the material provided

Evaluation is carried out by giving questionnaires before the training is carried out and at the time after the training is carried out. Based on the evaluation that has been done, most of the participants are interested in writing scientific articles and publishing the results of their research. However, the obstacle was that some participants still had difficulty using the literature review software and were confused about how to find out whether the articles made by the participants met a good standard and how to publish the article. As the results of the percentage analysis evaluation are below.

Table 1. Use of Information Technology Literature Review Scientific Articles

No	Knowledge	Percentage
1	Already	30%
2	Not yet	70%

In addition to the pre test, participants were also given a post test using the Google Form media. The use of Mandeley, Zotero, and the like software is interesting for participants, this is based on the assessments given by participants regarding the interest and efficiency of information technology media Mandeley, Zotero, and the

like in making literature reviews, an average of 70% of participants assess the making of article references more efficiently use the software or information technology. Participants also considered making scientific article references more interesting using information technology Mandeley, Zotero, and the like with a score of 80% as shown in the following table.

Table 2. Interest and Efficiency of Information Technology Literature Review

No	Aspect	Score
1	The process of making article references is more efficient using literature review information technology	70%
2	The process of making reference articles more interesting in information technology literature review	80%
3	Information technology Mendeley, Zotero, and the like are of interest to both teachers and researchers or article writers	70%

Manajemen Referensi dengan Mendeley, Medan, Yayasan Kita Menulis, 2020.

- [11] O. Pramiastuti, D. S. Rejeki and A. Pratiwi, Pengenalan dan Pelatihan Sitasi Karya Ilmiah Menggunakan Aplikasi Mendeley, Jurnal Abdimas Bhakti Indonesia, 1(1), 2020, pp. 24-30.
- [12] I. I. Supianti, Mendeley sebagai Alat Bantu dalam Penyusunan Referensi Artikel, Seminar Nasional dan Workshop Penulisan dan Publikasi Artikel Ilmiah, Bandung, 2018.

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