

Scientific Writing Competency of Agribusiness Study Program Students of Universitas Pembangunan Nasional Veteran Yogyakarta

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Abstract

This study aims to determine the competence of the Agribusiness Study Program of Universitas Pembangunan Nasional Veteran Yogyakarta students in writing scientific papers in journals. The method used in this research is the descriptive analytical method. The technique of determining the respondents used purposive sampling on students of the VI and VIII Agribusiness Study Programs who were taking their thesis. The data collection used was through a questionnaire and interviews. Data analysis was performed by tabulating data. The results showed that Agribusiness students already had adequate knowledge of scientific writing, including plagiarism, bibliography style, and Mendeley application. However, students still have difficulty writing scientific papers due to obstacles in obtaining references, compiling an introduction, and gathering a discussion.

Keywords: *Competence, Knowledge, Scientific Writing*



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INTRODUCTION

Publication of scientific works is an important agenda for academics and researchers, with scientific journal publications as a prerequisite for accreditation and credit scores and enriching scientific literacy for the future progress of the Indonesian nation (Tabrani, 2018). The importance of writing scientific papers has been noticed by the Directorate General of Higher Education (Ditjen Dikti) of the Ministry of Education and Culture by issuing Circular Letter No. 152/E/T/2012 dated January 27, 2012 regarding the Publication of Scientific Work. This letter is addressed to the Chancellor/Chairman/Director of PTN and PTS throughout Indonesia, a graduation requirement for undergraduate students who must produce papers published in scientific journals (Fitri, 2012; Nugrohadhi, 2017).

For undergraduate students, writing is a very close and essential thing. It is because in the daily academic activities, writing skills are almost always needed, in writing papers, writing research results, and writing a thesis. Even thesis writing is seen as an inscription that can be used as a lifelong memory for students and a requirement for obtaining a bachelor's degree. Therefore, it is very necessary for students to have a place in the publication of scientific works.

For the purpose of the Mission and Objectives realization of UPN "Veteran" Yogyakarta and Circular Letter No. 152/E/T/2012 regarding the Publication of Scientific Work, there are several obstacles/problems, especially in the Agribusiness Study Program, Faculty of Agriculture, UPN "Veteran" Yogyakarta. One of which does not yet have a publication forum which is an accredited and reputable indexed journal. The Agribusiness Study Program currently has a scientific journal called *Jurnal Socio-Economic Dynamics* established in 2000 and is published twice a year. The *Journal of Socio-Economic Dynamics* is still dominated by internal, that is, student writing. Students' writings in the making are still a summary of their thesis, it will cause duplication of scientific papers if all the writings are published online.

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The references included are still few and dominated by book theory, not similar research from supporting journals. It is due to the lack of knowledge of students about writing scientific articles.

Another obstacle is that the journal management system still does not use the Open Journal System (OJS) and is still manual via email. Even though it already has an OJS account in the e-journal of UPN "Veteran" Yogyakarta, it is only used for online article publication. However, the management is still manual via email.

This research is based on the development plan of the Socio-Economic Dynamics Jurnal which uses the Open Journal System (OJS) system and can be used as a forum for Agribusiness students in writing scientific papers. Therefore, it is necessary to study students' competence in compiling scientific papers to be published in online journals.

LITERATURE REVIEW

According to the Big Indonesian Dictionary, writing has the following meanings: (1) making letters (numbers and so on) through pens (pencils, markers, pens, chalk, and so on); (2) expressing thoughts, ideas or feelings (such as composing, writing letters) through writing; (3) painting, drawing, and (4) batik (fabric) making stories, sending letters, making letters, (Susanto, 2013). Meanwhile, Saleh Abas, defines writing as an activity to express ideas, thoughts, feelings, thoughts, anxiety, into linguistic symbols (written language) (Abas, 2006). A person's ability to write is determined by his accuracy in applying each element of language, organizing ideas into narrative form, accuracy in applying language, and choosing the diction to be taken. However, apart from all that, the actual ability to write is strongly influenced by the intensity of a person in reading.

Based on the understanding and explanation above, it can be concluded that writing can be defined as the ability or competence of a person to depict graphic symbols that are understood by the author as well as the reader into writing, to convey ideas, thoughts, desires, feelings, so that the reader can understand them. From this explanation, it can be identified that writing is one of the most important parts of everyday life.

Every individual has different writing abilities. Ability is the skill, ability, power to complete a task. Writing is an indirect communication with others, which is an effort to express everything contained in the concept of thought in the form of written language. Therefore, writing is an activity that requires the ability to express opinions, ideas, and imagination in written language. It shows that writing is an act, so "writing" means the act or behavior of communicating ideas or ideas in writing. While "scientific" means scientific; meet the rules of science. Thus, Scientific Writing is a behavior in expressing ideas in writing that meets the rules of science.

Therefore, scientific writing must be based on competence, which are competent in writing, and competent in scientific thinking. Scientific writing conveys scientific thoughts in writing and must meet scientific requirements, such as 1) factual, 2) logical, and 3) systematic. Scientific writing relies on writing skills and scientific ways of thinking that are poured into writing. Thus, a good scientific writing must be able to "close the distance" between the writer and the reader. Therefore, scientific writing requires the same understanding and interpretation between the reader and the content of the reading.

In the process, scientific writing must contain the characteristics of scientific work. Some important factors that must exist in a scientific writing are: 1) Content that presents factual ideas or logical ideas objectively and systematically, 2) Systematic that meets the rules of good writing and is regulated in scientific conventions, and 3) Language that describes ideas with straightforward sentences with clear diction and meaning and fulfills the rules of standard language.

RESEARCH METHOD

The method used in this research was descriptive analytical method. This method is a problem solving method by describing the current state of the research object based on the actual situation in the field. The data source employed primary data obtained by a researcher directly from the object or at the location under study (Asari, 2018). The technique of determining the respondents used purposive sampling. Research respondents were informants who were very knowledgeable about the required data (Suroso, 2014), that were students of the VI and VIII Agribusiness Study Programs who are currently taking their thesis. In this study, the number of respondents was 129 students. The data collection used was through a questionnaire and interviews. Data analysis administered data tabulation.

FINDINGS AND DISCUSSION

Writing scientific papers results from scientific thinking about specific disciplines that are arranged systematically, logically, correctly, holistically, and responsibly by using the good and correct language. In the language of students, scientific work is interpreted as an essay that presents opinions, observations, reviews, and research in certain fields which are arranged according to certain methods with systematic writing, polite language, and content whose truth can be accounted for. Hence, the knowledge of Agribinsis students is very high, as indicated by 98.45% of students knowing for sure what scientific work is, and only 1.55% who do not know.

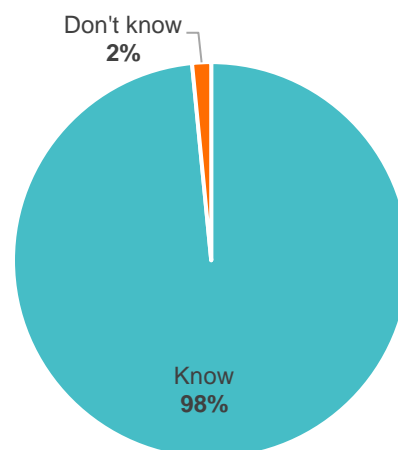


Figure 1. Student knowledge about scientific writing

Source : Primer Data Analysis (2021)

In terms of knowledge, students actually already know things related to writing scientific papers. The results showed that students learned about scientific works and knowledge about plagiarism, bibliography style, and Mendeley application.

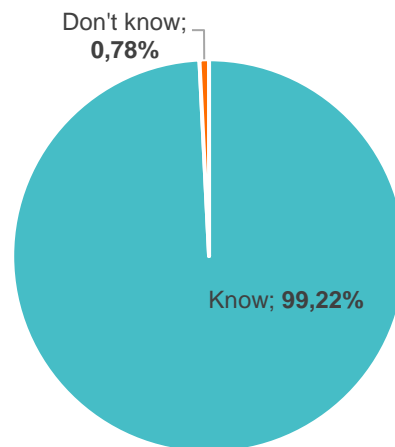


Figure 2. Student knowledge about plagiarism

Source : Primer Data Analysis (2021)

The knowledge of agribusiness students about plagiarism is very high. It is indicated by the number of 99.22% who know about plagiarism and only 0.78% who do not know. In student language, plagiarism is defined as taking words or sentences or other people's texts (duplication) without giving sufficient acknowledgment (in the form of citations). It is in line with the definition of plagiarism in the Big Indonesian Dictionary which states that plagiarism is plagiarism or taking essays, opinions, and so on from other people and making them look like their own compositions and opinions. It is also in line with the statement of Silverman (2005), which states that plagiarism is writing facts, quotes, or opinions obtained from other people or from books, papers, films, television, or tapes without mentioning the source.

The results of this study indicate that Agribusiness students already have knowledge about plagiarism, so they are expected to be able to apply it when writing scientific papers. This knowledge is also expected to be a guide in scientific writing on things which can cause plagiarism, which are rushing, lack of references that can cause difficulties in conveying ideas into writing well, lack of understanding of citation techniques which can cause reluctant to understand and choose the quick way by plagiarizing, and the lack of understanding about plagiarism.

Students' knowledge of bibliography is relatively high. Students understand the bibliography as a series of lists containing reference sources, references from a written work taken from books, printed media, documents, theses or scientific journals. Likewise, the knowledge of agribusiness students regarding bibliography writing style is quite high. It is indicated from the figure of 74.42% who know and only 25.58% who do not know. Students know that in writing a bibliography, there are certain rules that must be followed. Included in the writing of a bibliography is an article that contains a journal as one of its references. In writing the bibliography, there are several styles or contexts, including the APA (American Psychological Association) style, the MLA (Modern Language Association) style, the CHICAGO and TURABIAN style, the AMA style (American Medical Association), and the IEEE (Institute of Electrical and Electronics Engineers) style.

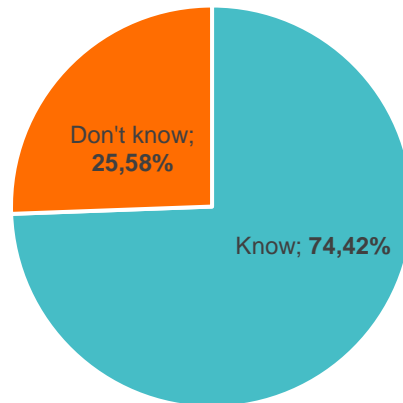


Figure 3. Student knowledge about writing bibliography

Source : Primer Data Analysis (2021)

Students understand that there are two styles in writing a bibliography, which are APA and Chicago styles. It is understandable, considering these two styles are frequently used in scientific writing, both in journals, seminar proceedings and writing of theses (for both undergraduate and master degree) or dissertations. Students' knowledge of bibliography indicates that Agribusiness students consider the importance of a bibliography in scientific writing to show that an article or scientific work is made based on the original thoughts of the author, but also obtains lots of references from various other sources people's thoughts. The bibliography is also used as a gratefulness for contributors to research data. Furthermore, a bibliography can also help readers who are willing to discover more about a particular topic or problem in a scientific paper. Therefore, when Agribusiness students write scientific papers, they are expected not to do it haphazardly. The writing must be based on rules that have been applied and are generally enforced.

Agribusiness students' knowledge of the Mendeley application is relatively lacking. It is presented from the figure that only 49.61% knew and 50.39% did not know. In the student's sense, the Mendeley application is only understood to assist in the insertion, writing, formatting of citations, and writing a bibliography. Whereas Mendeley is a software or application program developed by Elsevier to make it easier to integrate citations and references in a document. Before citing, the user needs to save all the document data to the Mendeley server. Furthermore, the data can later be inputted automatically in the selected document. By using Mendeley, authors or researchers can process every document they have to retrieve metadata of a document.

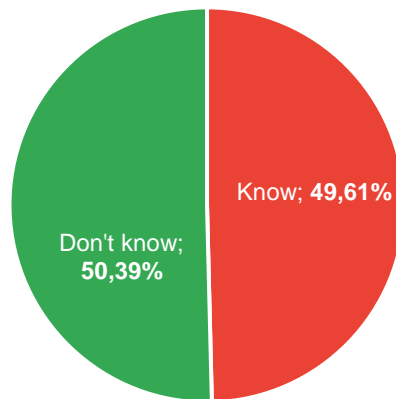


Figure 4. Student knowledge about Mendeley application

Source : Primer Data Analysis (2021)

Mendeley is currently being selected due to the ease of integration, in which Mendeley can be integrated with Microsoft Word software or application programs. It shows that Mendeley is a compatible application program and does not require additional requirements to be integrated. Some of the advantages of Mendeley, according to students, among others, are that it is relatively easy to understand how to use it by users, easy to operate and use the application, easy to learn by users and the appearance of the Mendeley application is attractive when used by users.

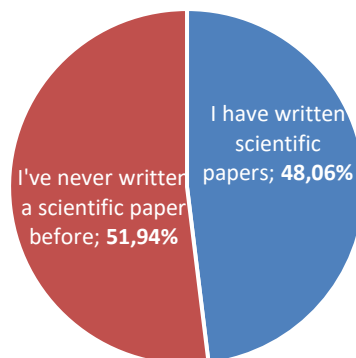


Figure 5. Student experience in writing scientific papers

Source : Primer Data Analysis (2021)

Based on the research results above, it can be concluded that Agribusiness students already have adequate knowledge of scientific writing, including knowledge of plagiarism, bibliography style, and Mendeley application. It is just that not all of them have written scientific papers. It is presented by the fact that only 48.06% of students have ever written scientific papers, either in the

form of papers, lectures, or theses. In the context of the competence to write scientific papers of Agribusiness students for journals or other publications, it turns out that students' ability to write scientific papers is still low. It is shown by only 10.85% of students who have ever written scientific papers in journals or seminar proceedings. This condition is understandable because there are still many students who have difficulty writing scientific papers. Based on the results of research conducted, the most difficult obstacle students encounter in writing scientific papers are obtaining references, compiling introductions, and compiling discussions.

First, finding a good thesis reference is sometimes quite challenging to conduct. Several things, including: can cause difficulty in obtaining referrals

1. The rapid growth of scientific publications

The growth of scientific work publications has recently occurred very rapidly, for instance, the publication of scientific papers in journals has doubled in 1950 in every 10 years and has now doubled in just one year. This condition will increase 2-fold every 73 days in 2020. However, the large number of scientific publications is accompanied by a decrease in the quality of scientific publications with the emergence of journals that no longer fully consider scientific principles and ethics. The reduced rate of scientific publications and a large number of scientific publications will make it difficult to discover the right thesis references for scientific works for students.

2. Barriers in the use of language and terms

English dominates most of the scientific publications published in journals. It causes an understanding of the English language is needed to understand what a scientific paper writer wants to convey related to his research. This condition makes it difficult to find the right references for students in writing scientific papers. Some students only search for references or journals in Indonesian. Until now, Indonesia itself has not conducted many scientific publications so that references to certain topics are quite limited. Besides the language barrier, the terms used in the reference search are also another problem. Certain scientific terms in Indonesian sometimes have to be matched in English. It is because not all of these terms are direct translations from Indonesian to English.

3. Not doing a search using a specific search method

Students who search journals for scientific work references sometimes just do a search by typing the entire title that he will write on the machine. This condition will result in the emergence of thousands and even tens of thousands of search results which will be difficult to filter which one is good and appropriate as a reference.

Second, compiling an introduction is sometimes difficult. The introduction is an introductory part of the research. The introduction is the "gateway" to a scientific work that will be made, because with the introduction, the information needed by the reader must be provided so that it is easy to understand the research conducted and the introduction must also be able to attract the attention of the reader. The clearer the introduction made, the more helpful the reader will be in deciding whether or not to read further. To make a good introduction, researchers can study the introduction of existing scientific works, both national and international scientific journals. Moreover, researchers can also use the CARS Model which is available in stages that make it easier to prepare.

Third, the difficulty in compiling the discussion. The discussion section on research results is the part that makes it difficult for students, because in this section, the tension between the rational and creative parts of the brain will be very clear, because they have to compare the results of

research with what is suspected based on existing theories to see what ideas or thoughts arise (Evans & Gruba, 2002). Writing the discussion chapter, do not repeat the statements that have been said in the research results chapter. Therefore, in conducting a discussion, a writer needs to control himself and focus on critical research findings. It is because the discussion is the answer to the problem formulation, so it must be presented in depth. Suryana (2010) explained that the discussion contains the research results both theoretically and empirically, which are then synthesized with the results of previous studies to identify convergence and divergence, whether the research results support the validity of a theory, modify, or even abort the theory. In this section is a synthetic thinking process between deduction and induction. Students' difficulty in writing this discussion is the lack of sources employed as references, so the resulting arguments are not strong enough. Reference sources in papers can be in the form of books, journal articles, research results, and others, both printed and online.

CONCLUSION

Agribusiness students already have adequate knowledge of scientific writing, including the knowledge of plagiarism, bibliography style, and Mendeley application. However, students still have difficulties writing scientific papers in obtaining references, compiling introductions, and compiling discussions.

REFERENCES

- Alam, R.L. dan Nasuha, A. (2020), 'Sistem Pengendali pH Air dan Pemantauan Lingkungan Tanaman Hidroponik menggunakan Fuzzy Logic Controller berbasis IoT', *ELINVO (Electronics, Informatics and Vocational Education)*, 5 (1), pp.11-20.
- Alifaldo, A. dan Soemardiono, B. (2018), 'Paduan Zona Agro Edu Tourism (AET) dan Plant Factory with Artificial Lighting (PFAL) pada Vertical Urban Farming', *Jurnal Sains dan Seni Pomits*, 7 (1), pp. G5-G9.
- Dariah, A. dan Heryani, N. (2014), 'Pemberdayaan Lahan Kering Suboptimal untuk Mendukung Kebijakan Diversifikasi dan Ketahanan Pangan', *Jurnal Sumberdaya Lahan*. Edisi Khusus, pp. 1-16.
- Diwanti, D.P. (2018), 'Pemanfaatan Pertanian Rumah Tangga (Pekarangan Rumah) dengan Teknik Budidaya Tanaman Sayuran Secara Vertikultur', *MATABE: Jurnal Pengabdian Masyarakat*, 1 (3), pp. 101-107.
- Fauzi, A.R., Ichniarsyah, A.N., Agustin, H. (2016), 'Pertanian Perkotaan: Urgensi, Peranan, dan Praktik Terbaik', *Jurnal Agroteknologi*, 10 (1), pp. 49-62.
- Johanras dan Sitandon, S.H. (2017), 'Peran Sawah Tadah Hujan Terhadap Ketahanan Pangan Nasional di Kabupaten Deli Serdang, Sumatera Utara', *Jurnal Agroteknologi*, 7. (2), pp. 15-20.
- Maulana, K. (2019), 'Peran Kelompok Tani terhadap Kondisi Perekonomian Petani', *Jurnal Pendidikan Teknologi Pertanian*, 5 (2), pp. 67-71.
- Pratama, Y.P., Samudro, B.R., Soesilo, A. M., (2019), 'Skema Model Vertikultur dan Implikasinya bagi Pemberdayaan Masyarakat, Studi Kasus Desa Karangpandan, Sukoharjo', *Jurnal Pengabdian dan Pengembangan Masyarakat*, 2 (2), pp. 1-7.
- Raya, A.B., Kriska, M., Kastono, D., Wulandari, N.T., Septijono, M.P., Handayani, V.W.S., Nugroho, A.D. (2020), 'Pendampingan Optimalisasi Pekarangan dengan Konsep Smart Agriculture', *Jurnal Pengabdian dan Pengembangan Masyarakat*. 3 (2), pp. 410-420.
- Rochayati, S. dan A. Dariah. (2012), 'Pengembangan lahan kering masam: peluang, tantangan, dan strategi, serta teknologi pengengelolaan dalam Prospek Pertanian Lahan Kering dalam Mendukung Ketahanan Pangan', *Badan Litbang Pertanian. LITBANG-PRESS*, pp. 187-206.