Jurnal Pengabdian Pendidikan IPA Kontekstual

e-ISSN. 3046-7918
Vol. 4, No. 3, August 2026
pp. 74-78

https://jurnalpasca.unram.ac.id/index.php/jppik/index

Improving Teacher Competence in North Aikmel Village in Writing Scientific Papers as a Support for Sustainable Professional Development

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Article Info

Article history:

Accepted: August 4th 2026,
Approved: August 20th 2026,
Published: August 31th 2026

Keywords:

Scientific Works; Teachers; Seminars; Sustainable Professional Development; Publications.

ABSTRACT

Writing scientific papers is a form of sustainable professional development that is important for teachers in improving professional competence. This activity aims to improve the understanding and ability of teachers in North Aikmel Village, East Lombok, in writing scientific papers to support Sustainable Professional Development. The activity was carried out on July 18, 2026 through three stages, namely preparation, implementation, and evaluation. The material provided included problem identification, determination of titles, preparation of problem formulations and objectives, background, literature review, research methods, results and discussions, citations, and bibliography. The evaluation was carried out using a participant response questionnaire consisting of 18 statements with four response options. The data was analyzed descriptively based on four indicators. The results of the evaluation showed a positive response of 98.41% on the understanding of the concepts and benefits of scientific papers, 97.14% on the understanding of writing systematics, 97.96% on the ability to compile scientific papers, and 98.41% on the ability to develop and prepare publications. The results showed that the seminar activities provided a very good understanding of the writing of scientific papers as a support for Sustainable Professional Development.

How to cite Rokhmat, et al. (2026). Improving Teacher Competence in North Aikmel Village in Writing Scientific Papers as a Support for Sustainable Professional Development. *Jurnal Pengabdian Pendidikan IPA Kontekstual*, *4*(3), 74-78. https://doi.org/10.29303/jppik.v4i3.1840

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Introduction

Teachers are professionals who have an important role in improving the quality of education. Teachers' professionalism is not only shown through the ability to carry out learning, but also through the ability to continue to develop competencies in accordance with the demands of their profession. Teachers' professional competence plays a role in creating a better learning process because professional teachers are able to implement learning strategies and present material effectively and pleasantly and support the development of students' potential in cognitive, affective, and psychomotor aspects (Gusmiati & Sulastri, 2023). The development of the teacher profession is one of the efforts to improve the quality of the learning process while developing teacher professionalism (Rahayu et al., 2018). Therefore, improving teacher competence needs to be done on an ongoing basis so that professionalism in carrying out tasks can continue to develop.

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Jurnal Pengabdian Pendidikan IPA Kontekstual
e-ISSN. 3046-7918
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One of the efforts to improve teachers' competence and professionalism is through Sustainable Professional Development (PKB). PKB includes self-development, scientific publications, and innovative works that are an important part of the development of teacher professionalism. Scientific publications and scientific presentations are a form of teacher professionalism development activities because they can be a means to develop and disseminate knowledge, ideas, and experiences in the field of education (Usra *et al.*, 2018). Scientific publications are also part of the development of the teacher profession that supports the improvement of professional competence and quality in carrying out their duties (Herowati, 2018).

The form of scientific publication that teachers can develop is scientific writing. The preparation of scientific papers is one of the important parts of the development of teachers' professionalism because it can support career development as well as a means for teachers to convey ideas and solutions based on problems faced in the field of education (Nuriadi *et al.*, 2023). Scientific works can come from research results or ideas obtained from experiences and problems found in the implementation of learning. Problems faced by teachers in the classroom can be the basis for conducting research as an effort to obtain solutions and improve the learning process. The results of the research can then be developed into scientific articles to be published through journals (Sukino *et al.*, 2023). The ability to produce scientific papers is also a form of teachers' efforts to develop themselves, expand their horizons, and share knowledge and experience in the field of education (Canada & Zulkipli, 2024).

However, teachers' ability to produce scientific papers still faces various obstacles. Teachers can experience difficulties in determining problems and titles, compiling scientific papers systematically, looking for relevant references, processing data, and understanding the scientific publication process. This condition is in line with Rokhmat *et al.* (2019) who show that teachers basically have various experiences and efforts in improving the learning process that can be developed into research and scientific papers, but these activities have not always been organized and reported in the form of scientific papers. The lack of professional development training and information about scientific publications can also be an obstacle to the development of teachers' professionalism (Basri *et al.*, 2021). This condition shows that improving teachers' competence in writing scientific papers is not enough only through theoretical understanding, but also requires activities that provide practical experience and skills.

One of the efforts that can be made to improve teachers' competence in writing scientific papers is through seminars and training. Scientific paper writing training activities can be a solution for teachers who have difficulties in compiling and publishing scientific papers. In addition to helping teachers understand the writing process, these activities can also increase teachers' insight and professionalism in developing their profession (Handayani & Dewi, 2020). Therefore, activities that provide an understanding of writing scientific papers while directing teachers to prepare works for publication are important to be carried out.

Based on this description, efforts are needed to improve teachers' competence in writing scientific papers as one of the supports for Sustainable Professional Development. North Aikmel Village, East Lombok, is the location for the implementation of scientific paper writing seminar activities which are directed to provide teachers with an understanding of the concepts and benefits of scientific papers, writing systematics, the process of preparing scientific papers, and the preparation of scientific papers for publication. This activity aims to improve teachers' competence in writing scientific papers so that they can support the implementation of Sustainable Professional Development in a sustainable manner.

Method

This activity was carried out as an effort to improve the competence of teachers in North Aikmel Village in writing scientific papers as a support for Sustainable Professional Development (PKB). The activity was carried out through three stages, namely preparation, implementation, and evaluation. The preparation stage included coordination with related parties, determining participants, and preparing materials. At the implementation stage, participants were given material on the procedures for writing scientific papers, including writing systematics, title preparation, use of references, citations, and bibliography. The delivery of material was carried out through presentations and interactive discussions.

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The evaluation of the activity was carried out using a participant response questionnaire consisting of statements about participants' understanding and abilities after participating in the activity as well as open-ended questions about obstacles and the need for further training. Participants' responses used the Strongly Agree (SS), Agree (S), Disagree (TS), and Strongly Disagree (STS) scales. Quantitative data was analyzed descriptively by calculating the percentage of each indicator, while open-ended answers were analyzed descriptively to identify participants' obstacles and needs.

Result and Discussion

The scientific paper writing seminar was held on July 18, 2026 in North Aikmel Village, East Lombok. The activity was attended by participants from various educational units with diverse field backgrounds. The material presented focused on the procedures for writing scientific papers, starting from identifying research problems, determining titles, formulating problems and research objectives, compiling background and literature reviews, determining research methods, presenting results and discussions, to citation techniques and compiling bibliographies. The delivery of material was carried out directly and was accompanied by an explanation of the stages of preparing scientific papers so that participants could get a clearer picture of the writing process.



Figure 1. Presentation of scientific paper writing seminar material

The evaluation of the activity was carried out using a questionnaire consisting of 18 statements to find out the participants' understanding and ability after participating in the activity. The participants' responses used four choices, namely Strongly Agree (SS), Agree (S), Disagree (TS), and Strongly Disagree (STS). The results of the questionnaire were then grouped into four indicators, namely understanding the concept and benefits of scientific papers, understanding the systematics of writing scientific papers, the ability to compile scientific papers, and the ability to develop and prepare scientific papers for publication.

Table 1. Participants' Positive Responses to Scientific Paper Writing

No	Indicator	Statement Number	Seminar Participant Response Percentage
1	Understanding the concepts and benefits of scientific work	1–3	98,41%
2	Understanding the systematics of writing scientific papers	4–8	97,14%
3	Ability to prepare scientific papers	9–15	97,96%
4	Ability to develop and prepare publications	16–18	98,41%

Based on Table 1, all indicators received a positive response with a percentage above 97%. The indicators of understanding the concepts and benefits of scientific works as well as the ability to develop and prepare scientific papers for publication obtained the highest percentage, namely 98.41% each. These results showed that participants gave a very positive response to the material provided and understood the importance of writing scientific papers in supporting professional development.

The indicator of systematic understanding of scientific paper writing obtained a percentage of 97.14%. These results show that the material regarding the preparation of titles, problem formulations, research objectives, background, literature review, methods, presentation of results, discussion, as well as citation techniques and bibliography can be well understood by participants. Understanding systematics is an important basis for teachers to start compiling scientific papers in a more targeted and systematic manner.

In the indicator of the ability to prepare scientific papers, a positive response of 97.96%

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was obtained. These results show that the activity not only provides conceptual understanding, but also provides an overview of the stages needed in producing scientific papers. Participants gained an understanding of the selection of research problems relevant to the needs of the school, background preparation, research methods, data processing, as well as the preparation of results and discussions.

Although the participants' response to the activity was very positive, the open answers showed that participants still faced several obstacles in continuing to write scientific papers. The obstacles conveyed included time constraints, difficulties in finding relevant references, difficulties in processing data, confusion in determining titles, limitations of devices such as laptops, and lack of assistance after training. Some participants also said that they still needed examples of scientific papers and direct practice in order to apply the material that had been obtained.

This need shows that scientific paper writing seminars can be the first step in providing teachers with an understanding of the process of preparing scientific papers. However, to produce scientific papers independently, participants still need follow-up activities that are applicative. This can be seen from the suggestions of participants who expect the training to be carried out regularly, have a longer time, accompanied by direct practice, examples of scientific papers, and mentoring until participants are able to complete scientific papers.

Thus, seminar activities contribute to strengthening participants' understanding of the procedures for writing scientific papers as a form of sustainable professional development. The sustainability of activities through training and mentoring can be the next step to help teachers develop this understanding into skills in producing and publishing scientific papers.

Conclusion

The results of the evaluation showed that all indicators obtained a positive response percentage of above 97%, namely understanding the concept and benefits of scientific papers by 98.41%, systematic understanding of scientific paper writing by 97.14%, ability to compile scientific papers by 97.96%, and the ability to develop and prepare scientific papers for publication by 98.41%. The results showed that the seminar activities were able to increase participants' understanding of the concepts, systematics, preparation process, and preparation of scientific paper publications as part of Sustainable Professional Development (PKB). Nevertheless, participants still faced obstacles in the application of materials, especially time limitations, reference search, data processing, title determination, device limitations, and lack of assistance. Therefore, seminar activities need to be continued with more applicable training and mentoring so that the understanding that has been obtained can develop into skills in producing scientific papers.

Suggestions

Based on the results of the activity, it is suggested that activities to improve the competence of writing scientific papers for teachers can be carried out on an ongoing basis through more intensive training and mentoring. Follow-up activities should provide a longer time and provide a larger portion of practice, such as the practice of determining titles, compiling scientific papers, searching and using references, making citations, processing data, and compiling articles for publication. In addition, the provision of examples of scientific papers and mentoring in stages until participants produce scientific papers that are ready to be published need to be part of the next activity. Support in the form of adequate facilities and tools also needs to be considered to help participants apply the skills that have been acquired.

Acknowledgments

The author expressed his gratitude to the Government of North Aikmel Village, East Lombok, for providing support and facilitating the implementation of the seminar on writing scientific papers. Thank you were also conveyed to all participants who had actively participated during the activity. Thank you to all parties who have provided support, assistance, and contributions so that the seminar activities could be carried out properly.

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Jurnal Pengabdian Pendidikan IPA Kontekstual

e-ISSN. 3046-7918
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