

Training Activities on Classroom Action Research as a Scientific Article Writing and Publication Project for Teachers

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ABSTRACT

This classroom action research (CAR) training activity as a scientific article writing project was carried out based on the problems faced by teachers at SMAN 1 Tempuling, namely lack of knowledge and experience implementing and reporting CAR in writing scientific articles as well as teachers' low awareness of the importance of researching and producing scientific articles. Therefore, the community service team of the Faculty of Education and Vocational Studies, Lancang Kuning University provides training to teachers, namely: (1) discussing in groups to formulate CAR problems, (2) determining strategies, models, techniques and media that can be used as solutions to learning problems learning in class, (3) teachers are given examples of scientific published articles which are the results of CAR, (4) providing several links to PTK journals as reference materials, (5) assisting participants' CAR project by providing explanations, revisions and input. To complete the CAR assignment as a project for writing and publishing scientific articles, participants are given 4 weeks. Consultation on assignment completion is carried out via WhatsApp. Finally, the community service team concluded that CAR training activities as a scientific article writing and publication project for SMAN 1 Tempuling teachers could provide knowledge, understanding and abilities to participants to carry out CAR, report CAR results, write drafts of scientific articles and publish them.



1. INTRODUCTION

The research commonly conducted by teachers is Classroom Action Research (CAR), based on the demand that teachers not only teach but also conduct research and publish their findings. Action Research is a form of self-reflective inquiry carried out by researchers in social situations (including education) to improve the rationality and justice of: (a) their social or educational practices, (b) their understanding of these practices, and (c) the situations in which the practices are carried out (Kemmis & Taggart, 1992). According to McNiff & Whitehead (2002), action research is a term that refers to a practical way of looking at one's own work to check if it meets the desired outcomes. Based on the above definitions, in the context of Classroom Action Research (CAR), it can be defined as a reflective investigation by a researcher in the classroom. Actions are taken to improve the rational stability of their actions when performing the daily work of teachers, to deepen their understanding of the actions taken, and also to improve the conditions in which learning practices are conducted. To achieve these goals, CAR is conducted cyclically, consisting of four stages: planning, action, observation, and reflection.

Classroom action research can offer favorable conditions for designing learning environments in a specific manner, as needed (Collins, 1992). The classroom in CAR involves a group of students during their learning time with the teacher as the facilitator of the learning process. Therefore, CAR problems are quite broad, including (1) student learning issues in schools, such as learning problems in the classroom, errors in the learning process, misconceptions, lack of learning strategies, and so on, (2) teacher professionalism development by improving the quality of planning, actions, and program evaluation, as well as learning achievements, (3) managing and controlling, such as introducing behavior modification techniques, motivation techniques, and self-potential development techniques, and (4) classroom learning design and strategies, addressing managerial problems and learning procedures, implementation, and innovation of teaching methods (for example, changing conventional teaching methods with new ones), classroom interactions (for instance, using instructional methods based on a particular approach). In this way, action research can contribute to design science, where theory is directed at how different designs of school learning environments contribute to learning, collaboration, and motivation.



Furthermore, teachers as researchers can report the results of CAR and write them in the form of scientific articles for publication.

Writing and publishing scientific papers mark the final reporting point of research that has been conducted, completed, peer-reviewed, and accepted, complementing teaching and training in various fields of science. Writing has many benefits, one of the most important being the inherent training to better appreciate and evaluate the work of others that has been published, in addition to having specific credit points for the author for rank promotion and other purposes. A published article is irrefutable evidence of research that has been conducted, completed, and accepted by many. Conducting scientific research impacts broader research and the scientific community and must be published in outlets accessible to relevant scientific professionals (Hoogenboom & Manske, 2012). Publication is also an indicator of achieving a certain academic standard. Besides communicating the completed research results, the written work also forms the basis for further opinions, views, and criticisms from professionals and academics separated by time and distance.

So, how has research and scientific article publication developed in Indonesia? The fact is that the government continues to motivate and facilitate the academic community in Indonesia to publish their research findings in both national and international journals to increase Indonesia's academic publications in reputable international journals. Data from Kemenristekdikti (2016) shows that the publication of Indonesian academics from 2010 to 2016 has significantly increased, although compared to academic publications from neighboring countries like Singapore, Malaysia, and Thailand, the numbers are still much lower. According to data from the Ministry of Research, Technology, and Higher Education, the number of academic publications in international journals indexed by Scopus and Web of Science has significantly increased year by year and is higher than the number of publications from the Philippines. Despite the Philippines having English as a second language, this indicates that mastering English is not a significant barrier for Indonesian academics to publish research articles in English-language international journals.

According to Arsyad (2018), a research article is a scientific writing that must be argumentative and persuasive. Therefore, authors must clearly state their arguments and support them with convincing data or references so that their research results are referenced or cited. In a research article, there are at least three sections that must be convincingly (argumentatively) written using the appropriate rhetorical style as expected by journal readers, namely: 1) the abstract, 2) the introduction, and 3) the discussion. The most important practical reason for knowing how to write is the benefits derived from writing training, which subsequently makes one discriminative and critical during the manuscript preparation process. Scientific writing requires discipline in conducting a comprehensive literature search, collecting and analyzing data, writing, and revising various manuscript drafts. Once the manuscript is well-received, the author will be in a better position to appreciate what is written in journals and other scientific publications.

The development of scientific articles can help promote scientific thinking (Keys, 1999). With the abundance of information now available in so many journals and other printed materials, it is crucial for all professionals and academics to assess the quality and reliability of published works. If one has published and appreciates the process of writing, reviewing, and editing, then they will be better able to read articles with proper scientific and critical techniques, and evaluate the scientific articles for their true value. Feyera, Atelaw, Hassen, & Fufa (2017) state that several important measures should be taken to increase publications among academics in an institution, including recognition, rewards, training, financial support, and a conducive writing environment. Olszewska & Lock (2016) express a similar sentiment, noting that key factors contributing to academic writing success among academics include writing in groups or collaborating with clear objectives, committed team members, and campus support. In this way, writing teams will develop academic writing competencies through task sharing with other team members, correction, and joint discussion during the writing process.

However, according to Arsyad, Purwo, Sukanto, & Adnan (2019), there are three main obstacles preventing academics such as lecturers from publishing research articles in reputable international journals: 1) a lack of confidence in the quality of their research and articles, 2) the perception that publishing research articles in reputable journals is quite difficult and time-consuming, and 3) the lack of incentives if their articles are published. These issues have long persisted, thus hindering some academics from writing and publishing scientific articles.

The issues in scientific article writing and publication highlighted by Arsyad et al. (2019) are also faced by teachers in high schools, such as at SMAN 1 Tempuling and other schools. High school teachers are now



required to conduct research, write scientific articles, and publish them as a requirement for professional development. However, through Classroom Action Research (CAR) that they conduct, they can actually help themselves in writing a research-based scientific paper. To overcome this problem, internal motivation from teachers is very important for several reasons: 1) to learn how to write the results of CAR and become familiar with the format and writing style of journal articles; 2) to frequently practice writing articles collaboratively with the help of mentors or experienced writers and submit them to reputable national and international journals; 3) to always revise their article drafts following the suggestions and corrections from journal editors and/or reviewers; and 4) to often attend seminars and workshops on academic writing, especially those aimed at writing articles for publication in national and international journals.

Based on information obtained from SMAN 1 Tempuling, Tembilihan, and surrounding schools, several issues were identified regarding teachers' implementation and reporting of CAR results and writing them into scientific articles followed by publication in journals. The problems identified by the service team include a lack of knowledge and experience in making CAR reports and writing scientific articles, low awareness among teachers about the importance of conducting research and producing potentially publishable scientific articles for the teaching profession, limited knowledge about scientific journals where they can publish their articles/writings, and the absence of a medium/journal house in their academic environment that can publish teachers' scientific works both in print and online.

Based on the explanation above, efforts are needed in the form of training to address the issues faced by teachers at the partner schools. In this case, the activities to be carried out include providing training to teachers so they can create CAR reports and write their CAR results well according to the principles of scientific article writing. This will enable them to produce potentially publishable scientific articles. On this basis, the community service activity team is interested in and considers it necessary to conduct training activities at the partner school SMAN 1 Tempuling and surrounding high schools.

2. METHOD

Activity Procedure

The implementation method for this community service activity was carried out based on the following steps:

1. Conducting a situational analysis phase in the form of field observations and interviews with the Head of SMAN 1 Tempuling, Tembilihan.
2. Identifying partner problems to find solutions.
3. Using the lecture method via Zoom meetings to provide participants with an understanding of the community service theme tailored to the partner's needs, namely Scientific Article Writing Training for SMAN 1 Tempuling, Tembilihan. The lecture method in this training avoids prolonged theoretical discussions and instead emphasizes case examples and their solutions. The presentation of the material is followed by a question and answer session and discussion.
4. The discussion method via Zoom meetings is chosen to give participants more opportunities to discuss, ask questions, highlight, provide input, and deepen the material presented. This method is given more time than the lecture.
5. Group or individual tutorial methods are selected to complement the understanding of the PTK Training as a Scientific Article Writing Project that has been lectured and discussed by applying it directly, namely by assigning training participants to start writing a draft scientific article from research they have previously conducted.
6. The service team provides revisions and suggestions on the draft scientific articles designed by teachers based on the results of PTK they have conducted, with guidance provided. The approach in this method is learning by doing with assistance from the service team as resource persons.

Participants and Activity Location

The community group or partners are SMAN 1 Tempuling and the teachers around the school. This school is located at Jl. 21 Maret Sungai Salak, Tempuling District. In this community service activity, the team from the Graduate School, Universitas Lancang Kuning involved around 20 teachers as training participants. This activity

was carried out via Zoom meetings considering the long distance from the service location to the city of Pekanbaru.

3. RESULT AND DISCUSSION

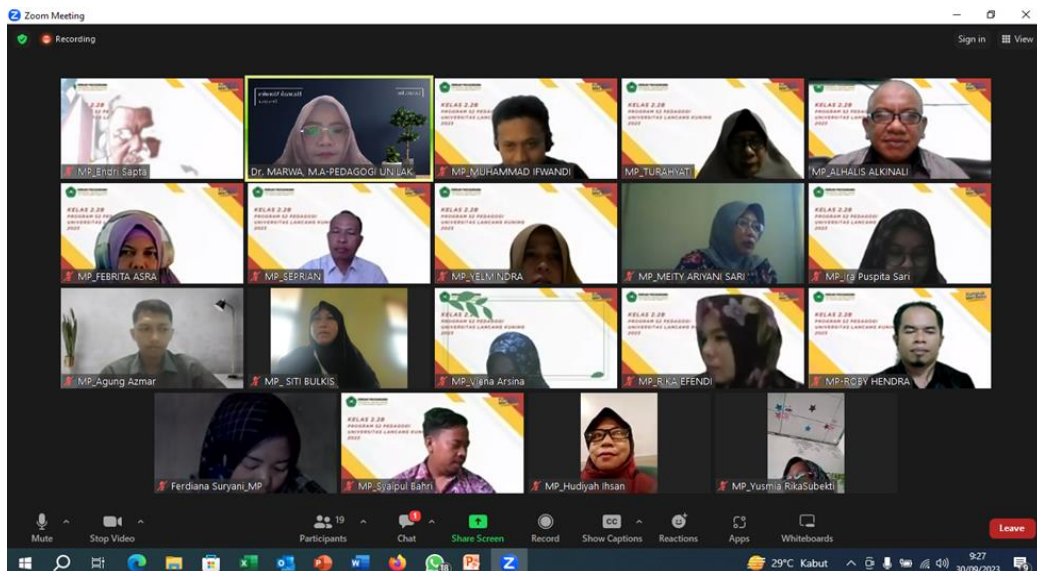
The Classroom Action Research workshop activities, serving as a project for writing and publishing scientific articles for teachers at SMAN 1 Tempuling, Tembilahan, were conducted in several stages. The first activity involved the implementation team conducting a situational analysis phase in the form of interviews with the Principal and teachers regarding their experiences with classroom action research (PTK) and their scientific research and publication activities while teaching at the school. Following this, the implementation team identified the partner's problems to find solutions. The team then decided to provide training on classroom action research as a project for writing and publishing scientific articles, guiding SMAN 1 Tempuling teachers on how to write scientific articles and publish them based on the results of PTK in their respective classes.

On September 30, 2023, the community service team from the Faculty of Education and Vocational Studies (FADIKSI) at Unilak conducted a workshop via Zoom Meeting from 08:00 to 12:00 WIB, attended by 20 teachers from SMAN 1 Tempuling and several others from nearby schools. Before delivering the material and training, the presenter (Dr. Marwa, M.A) conducted an oral diagnostic test consisting of three questions regarding the teachers' experiences with classroom action research, writing scientific articles from PTK results, and publishing their writings. The training participants answered the questions in turn within 15 minutes. The three questions were as follows:

1. Have you ever conducted classroom action research and made a report on it?
2. Do you have scientific articles published in educational research journals?
3. What are your obstacles in compiling PTK reports and publishing the resulting articles?

The purpose of these questions or diagnostic tests was to determine the level of understanding and experience of the training participants, who were divided into six groups, regarding the topic of PTK as a project for writing scientific articles. The results of this oral interview generally indicated that teachers had frequently implemented PTK patterns in their classes, but unfortunately, they had never systematically reported them. In fact, PTK is a combination of quantitative and qualitative research. Data collection in PTK must be carried out meticulously, encompassing both quantitative and qualitative data, which is typically collected through interviews, classroom observations, audio/video recordings, and other documentation. This aspect of PTK was not well understood by the teachers during its implementation.

Picture 1: Activity Photos of Community Service via Zoom Meeting (September 30, 2023)



Sample interview results from the group of training participants in response to the first question, "Have you ever conducted classroom action research (CAR) and written CAR reports?" A representative from the group answered that generally they have conducted CAR when identifying learning problems to find the best solutions. However, they did not systematically write CAR reports by conducting field notes or collecting important CAR



data, thus they couldn't produce the CAR report. For the second question, "Do you have any published scholarly articles in educational research journals?" The majority answered that they haven't published research articles. Only about 3 out of 20 participants have conducted research along with publishing scholarly articles. As for the third question, "What are the challenges you face in preparing CAR reports and publishing CAR research articles?" Participants generally answered that they lack motivation to write CAR reports based on their classroom learning activities. They also expressed doubts about the CAR cycle process and the ideal number of meetings per CAR cycle. Participants felt less confident in writing and publishing their CAR research findings in reputable national journals due to a lack of understanding of the intricacies of manuscript writing and submission. Field findings from this service activity align with Feyera, Atelaw, Hassen, & Fufa's (2017) assertion that several important actions are necessary to enhance academic publications, including recognition, rewards, training, financial support, and a conducive writing environment.

Furthermore, the implementation team carried out the following activities: delivering a session on CAR and reporting CAR results, followed by an explanation on writing and publishing scholarly articles (from 8:30-9:30 AM WIB). In this session, Dr. Marwa, M.A., presented a PowerPoint on CAR and its steps: problem identification, problem formulation, goal formulation, literature review, hypothesis formulation, data collection steps, data processing steps, data collection, and research report writing. The presenter also explained the CAR design stages: planning, implementation, observation, reflection, and evaluation in each CAR cycle to resolve student learning problems comprehensively. After explaining CAR topics, the presenter discussed the components of a scholarly article related to CAR, such as article title, author names, abstract writing, and keywords covering: research problem and/or objectives, research procedures, summary of research findings, conclusions, introduction writing, research method writing consisting of research design/procedures, population & sample/data sources, tools/instruments & materials used, data collection and analysis techniques, and explanation of results and discussion as well as conclusions. The presenter also provided guidelines on writing references using primary (research results) and recent (last 10 years) literature and citation style.

At 10:00 AM WIB, participants were asked to discuss in groups and design CAR based on classroom problems related to student learning issues in specific subjects. In this activity, the presenter provided several steps: (1) group discussion to formulate CAR problem statements, (2) determine strategies, models, techniques, and media that can be used as solutions in classroom learning problems, (3) teachers were shown examples of scholarly articles resulting from CAR published in a journal, (4) provided several CAR journal links as references, and (5) resource persons assisted participants by providing explanations, revisions, feedback, and other support in creating CAR backgrounds linked to scholarly article writing guidelines. To refine CAR tasks as a scholarly article publication project, the implementation team provided participants with 4 weeks. Consultation on completing workshop tasks was conducted via WhatsApp. After evaluating the CAR training activity as an initial stage of a scholarly article publication project, several installments of activities were completed by 6 participant groups, which were divided and summarized in table 5.1.

Table 1: Results of Participants' Classroom Action Research (CAR) Training Activity as a Scholarly Article Writing and Publication Project

Participants	Progress of Classroom Action Research (CAR) Implementation	Writing CAR Report in Article Format	Time allocation for writing and submission of the CAR article to journals
Group 1	Completion	Completion Stage	1-2 months
Group 2	Completion	Completion Stage	1-2 months
Group 3	Completion	Completion Stage	1-2 months
Group 4	Completion Stage	Completion Stage	1-2 months
Group 5	Completion Stage	Completion Stage	1-2 months
Group 6	Completion Stage	Completion Stage	1-2 months

From Table 1, it can be seen that each group of training participants in Classroom Action Research (CAR) as a scholarly article writing and publication project has completed several key activities assigned to them. Upon reviewing the work stages achieved, participants in groups were able to: (1) complete the implementation of CAR despite 3 other groups still being in the process of completion, (2) prepare CAR reports in the form of article



formats, although the 6th group of participants is still in the completion stage, and (3) allocate a given time frame of up to 2 months for participants to write and submit their CAR article to targeted journals.

Finally, the implementation team from the Faculty of Education and Vocational Training at Lancang Kuning University concluded that the CAR training activity as a project for scholarly article writing and publication among teachers from SMAN 1 Tempuling and their colleagues provided knowledge, understanding, and skills to participants to conduct CAR, report CAR results, draft scholarly articles, and eventually publish them. The successful outcomes of this training activity provided to the group of teachers from SMAN 1 Tempuling are consistent with the statement made by Olszewska & Lock (2016) that factors such as collaborative writing or collaboration with clear objectives, committed team members, and campus support greatly contribute to academic writing success. Consequently, the writing team will enhance academic writing competencies through shared tasks among other writers, corrections, and discussions throughout the writing process.

4. CONCLUSIONS

Based on the community service activities conducted, the Faculty of Education and Vocational Training at Lancang Kuning University concludes that the Classroom Action Research (CAR) training as a project for writing and publishing scholarly articles among teachers from SMAN 1 Tempuling and their colleagues provided knowledge, understanding, and skills to participants to conduct CAR, report CAR results, draft scholarly articles, and eventually publish them. It is evident that working on projects in groups had a positive and beneficial impact on the participants in the CAR training as a project for writing and publishing scholarly articles. Each group was able to complete several key activities assigned to them effectively.

Based on the above conclusion, it is necessary to conduct CAR training as a project for writing and publishing scholarly articles among teachers at the elementary and secondary education levels. The process of writing scholarly articles by teachers should be preceded by CAR conducted in their respective classrooms. This means that the scholarly articles produced by teacher-researchers are genuinely based on real field research experience. For reporting CAR results, they should be formatted into article templates suitable for the targeted journals, following correct scholarly article writing methods.

For future research and community service teams, there should be continued emphasis on coaching teachers in CAR activities and supporting them in writing and publishing their scholarly articles.

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