

Increasing the Competence of Scientific Publications of Technology-based Primary School Teachers in Indonesia

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Abstract—The purpose of the study is to increase the competencies of scientific teacher's publication. Teachers are not hampered in promotion and other position. The method used to achieve the goal is Training for 36 hours. Face to face for 6 times of meetings, individual guidance by WhatsApp (WA) through chat and video call, telephone, or e-mail on 3 times of meetings, structured group guidance. The result of the training is the teachers have the scientific publication competencies, such as: teachers getting instructor experience in a scientific publication, scientific articles, characteristics of scientific articles, the benefits of writing, how to write articles, ethics of scientific writing, and plagiarism. Teachers can compile scientific articles that are ready to submit to ISSN journals. The teacher increases the competence to write scientific work.

Keywords—improving; class teachers; publication competencies

I. INTRODUCTION

The elementary school in Sukaraja District sub-district of Seluma Bengkulu Province Indonesia has 14 schools and 200 teachers, only one among them who has Rank IV/b. It is because the teachers could not gain the qualifications that they must have scientific publications. The competence of the teachers is not adequate to the scientific publication. The teachers become worry even tends to be apathetic. Teachers perform perched until their retirement age. Teachers tend to not care and there is no effort is done because of the lack of the ability of the teachers in the scientific publication. The difficulty of the teachers up the rank especially from IV/a to IV/b is the teachers cannot create a scientific paper as has been determined and the Decree of the Minister of Pemberdayaan Aparatur Negara Number: 26/Menpan/1989 on 2 May 1989. Also the decree of The Minister of Education and Culture and the Head of the State Administration 57686 Number/MPK/1989 and Number 38/SE/1989 and the rule with the minister and head of the BKN no. 03/V/PB/2010 Number and 14 2010. On the article 42 teachers start to increase the rank of/functional position from III/b to III/c teachers required to implement the self-development activities and scientific publication/innovative works. According to the regulation means that teachers are required to arrange the scientific paper

earlier from Rank III/b. The problems increase the rank of teachers especially from the IV/a to IV/b has become national issues. Hundreds of thousands of teachers suspended in the IV/a because they have not been able to arrange the scientific paper as a condition of up to IV/b. [1]. As reported in *Kompas* daily edition of the Friday 2009 as follows: The teachers of civil servants in the level of primary and secondary education is difficult to achieve the above Rank IV/a because their ability in making the paper is still weak. Whereas, making it became one of the requirement. Based on the National Staffing Agency data in 2015, around 1.4 million civil servant teachers. Generally, the amount of the teachers in the rank III/a to III/d is 996.926 teachers, 336.601 teachers for IV include 334.184 teachers for IV/a, 2.318 teachers for IV/b, 84 teachers are on IV/c and on IV/d, there are fifteen teachers [2]. Instruction may help writers acquire skills and knowledge of writing for publication. Training may help teachers improve confidence in teaching writing [3]. *Teacher competency in scientific publications is closely related to teacher activity in participating in training on scientific publications. Teachers should actively participate in scientific publication training, even teachers should be required to attend scientific publication training.* The study suggests that research skills should be a must course in pre- and in-service teacher education programs [4]. In the field of study during this research found that most of the teachers in the schools are oriented more on the mission of education in class than the vision and mission in the form of writing and scientific publication. It means that scientific publications among teachers are neglected. The implications of these facts, writing and drawing scientific paper among teachers are still very poor. This is marked with the low scientific productivity in teachers writing and scientific work publications [1]. The difficulty teachers is the teachers has low competencies and interest in scientific publications especially popular science writing to improve their professional development [5] Mental teachers who are apathetic in terms of scientific publications need to be revolutionized. Teacher empowerment, as a process that enables teachers' intrinsic motivation and brings out their innate potential, is of critical importance in modern times [6]. The teachers are still experiencing difficulties to get higher ranks because they still have not been able to arrange the

scientific paper. This problem can be caused by: teachers rarely get training especially the training of scientific publications [7], the teacher has not been considered important training yet [8]. They have not had partners who can train them to write scientific papers, they have not created academic culture especially in writing scientific papers yet, there is no available adequate funding to train the teachers, there are still no positive attitude from the teachers to perform scientific publication [8]. Technology makes it easier for teachers in scientific publications, including available research results in e-journal, which can be obtained through the internet [9]. To help teachers to have scientific publication competencies, teachers need to be provided with training and mentoring in scientific publications structured directly by groups and individuals as well as indirect mentoring training, namely using information technology including: email, telephone, video calls and WhatsApp.

II. METHOD

The location of the training activities will be conducted in Elementary School of Sukaraja District Village, Sukaraja District, Bengkulu Province, Indonesia. The approach that will be applied is mentoring training using methods lectures, tasks, discussion and guidance [2,10]. Lecture is used to deliver the training material that contains six subject. The question and answer are used to convey the material. Participants will be given the opportunity to ask questions to the trainers and trainers also have the opportunity to the participants in the training. Task is also used in the discussion session of the group and the percentage of tasks. The discussion is used in completing tasks and the percentage of tasks. Structured guidance used in guiding the task of preparation of scientific articles for individuals and groups.

Interview, observation and the spread of the questionnaire are used to evaluate the training activities [11,12]. Interview used to obtain the data the difficulties teachers attending the training and suggestions for the improvement of the training. The observation is used to observe how active the teachers in the training and everything that happened in the training. The spread of the questionnaire is used to know the customer satisfaction in the training.

The focus of this activity is the training on how to write scientific articles. The training will be held for 3 (three) months. The meeting in three months will be done in a face-to-face meeting and guidance of group and individual guidance;

The steps of the activities consider the development research [2]. The implementation of the following activities: The preparation of Activities: team discussion, task distribution preparation of training materials, copying and binding the training materials, arrangement of training schedule, preparing supporting tools, checking and getting the permission, coordinating to the head of the school principals working group, monitoring the readiness of participants, preparing the transportation, and discussing the implementation. The implementation of the Activities: give training to the head of the teachers about the theory and practice of scientific articles, evaluation team on the implementation of the training. Evaluation activity: an interview with the participants and

related officials, spread about the activities of the evaluation instrument, analyze the results of the evaluation team meeting discussion of the evaluation result. Closing activities: team will have a meeting to draw up a report, making a report.

The participation of the teachers are as follows: providing space for the training activities, provide chairs, the table and the blackboard, prepare the list of attending participants, preparing the snacks and food for the participants and the team, recording or documenting all activities, conveying the problems that occurred and attempt to resolve, preparing the loudspeaker and drawing up a brief report each activities

After the end of the activities, there will be a meeting with: the head unit of technical practitioners of national education, the head of the district education office in Seluma, chairman of the working group for principals and teachers.

III. RESULT AND DISCUSSION

The participants in this training were 14 teachers. One school was represented by one of the teachers. The participants attended the training was the one that get the letter from the school. They are obligated to follow the training activities from the beginning to the end of and able to deal with the training regulations. If the participants in the training could not follow the training activities, then the principal would change them with the other teachers.

The training team held a meeting about the plan of training activities in scientific publication. The results of the meeting was the team divided the task of preparation of the training material. The leader of the team assigned to arrange the matter: experience in arranging scientific articles, the meaning and the essence of scientific articles, the benefits of writing articles, ways of writing the title, the name of the author, abstract and introduction, ways of writing the method, results, discussion, conclusions and a list of the library. Members 2 and 3 make up the material the ethics of scientific articles. The arrangement of the material done by each of the team members during the fifteen days, then team held a meeting of evaluation training materials.

After the preparation of the training material, team in coordination with the head of the school principals' working group and the head of the technical executive unit of national education to arrange the schedule of training activities. The training schedule is agreed together, it did not bother the activities of the teachers in carrying out their task as teachers. The first training activities started at 10. It finished faster due to fasting day. The next activity started at 13 after school hour. The schedule could be changed when there are obstacles, but the schedule could be changed after there was an agreement from the team of trainers and the teachers.

Then the team prepared the appliance and supported tools, paper, map, *Infocus*, camera and banner. Then the team arrange the permission letters. It is begun from UNHAZ, then the team went to the head of the Center for integrated permissions of Bengkulu province, then to the head of the Center for integrated permissions Seluma Regency, the head of the office of the welfare of the nation of Seluma Regency to the district education office in Seluma. After the team completed the

permission letter, they conducted activities according to the plan that has been compiled.

Before the activities' implementation, team checked for the data of the training participants. The data that should be checked were the name, the original school, rank deals, address, phone number or cell phones, work address and task letter from their school principals.

The implementation of the training started with a meeting with the head of the district education office in Seluma, the head of technical principal of Sukaraja District, sub-district head of the school principals' working group. The purpose of the meeting was that the training team explained the plan of the training activities in order to convey the realization of the implementation training plan of the training and asking for advice on the implementation of the training scientific articles arrangement.

The participants were 14 teachers were invited in the opening. The Dean and Vice lecturer of Faculty of Education and Training Program Unihaz, the chairman of the research institutions Unihaz were also attended the opening ceremony. In the opening of the chairman of the team explained the participants and all the invitation about the purposes of these training activities. The Dean of the Faculty of Education Unihaz also talked about the benefits of the training activities that could help teachers to solve the problems faced by teachers in scientific publication. The last, he gave some motivation to the participants on how to write scientific article seriously in order to have competency writing scientific articles. The head of the National Education Technical Unit also gave instructions to the participants and would like to thank the team and approve the training activities and motivate them to follow all the activities so their problems can be well resolved. Then the head of the Technical Executive Unit National Education Office officially opened the training activities. The opening finally closed by praying delivered by a representative of the participants and then the training event was started.

The training material is as follows: The experience of writing the article, sub training material is the explanation of the experience of the trainers, write articles and send the article to the journal. The meaning and the Essence of the article, sub matter is the number of the number of credit that must be owned by the teachers to rise in ranks, meaning of scientific articles and characteristics of scientific articles. The Benefits of writing articles, sub matter is the reason teachers do not make scientific publication, benefits of scientific publication. The terms of the writing of the article, sub matter is the rule of scientific rules and the rules of the specified by the journal intended. The rendering of the A. sub matter is how to make the title, the name of the authors of abstract and introduction. The rendering of the two, sub materials is the method results and discussion, conclusions, preface and references. The ethics of scientific writings, sub matter is the meaning of ethics researchers, writer rights, the duty of the author, commandments author, the duty of the author, code of ethics researchers, scientific, plagiarism violations.

In addition to these materials were, the teachers were given examples of scientific articles that have been published in the journal of surfing the ISSN. The teachers assigned to learn the

example of this article and ask questions or discuss with the trainers the things that are not yet understood.

The training was conducted six times face-to-face using methods lectures, question & answer and discussion. After six times a meeting of all the participants were given the task to create scientific articles. In the making of this article teachers guided group and individual each of the three times the meeting. The guidance is carried out in the place of training in the Elementary School Number 21 Sukaraja District. The teachers can also come to campus Faculty of Education Unihaz Bengkulu, which is 21 Km from the address of the dwelling place of the teachers. The teachers are guided through WhatsApp, video call, email and phone. After the training, the teachers could complete the task of drawing up scientific articles, with gather to the team of scientific articles. Then the teachers were given a certificate of training as evidence has followed the training activities and evidence of a report to the Head of the school, and team did a dissemination to the lecturers of Unihaz, students and teachers.

The teachers were still difficult to find raw materials scientific articles due to the limitation of the ability to use a computer and the ability to understand the writings of English-language [13]. The teachers needed to improve training with colleagues of teachers in the preparation of scientific articles [7]. The school environment also needed to support and the teachers must have positive attitude which means considers the importance of scientific publication and provide time to practice scientific publication [8]. The teachers also needed to held training in small groups [14]. Small groups make it easier for the teachers to share ideas with friends about the difficulties faced by teachers in scientific publication. The teachers needed to exercise continuously and actively participating [14]. The teachers needed to learn the writings or articles that have been published [7]. The teachers also needed to consider the ethics of scientific publication and data must be accurate, avoid counterfeits [15]. The teachers also needed to work together with colleagues to receive advice from colleagues. The recognition of colleagues was really needed in the scientific publication [15]. The training activities could increase the amount of the teachers that do scientific publication, because scientific publications of the teachers are still scarce. Teachers who have competencies in scientific publication can become professional teachers. They could start is by reading many scientific articles, so that the teacher know the various style of writing and different scientific articles in many media. After the teacher read scientific articles, analyze and discuss the characteristics of scientific sentences [16].

The results showed that the students informed that they were assisted in writing researcharticle abstracts, in developing abstracts into research articles, and in developing sections of the research article [17]. Training needs to be developed in combination with other methods. Most training studies used a combination of two or more methods that most commonly included a didactic, feedback, or goal setting component [17]. This training activities were very useful for teachers of Seluma, then training team is expected to the head of the district education office in Seluma to continue this training activities to all the teachers in the district of Seluma so all of the teachers in the sub-district Sukaraja District could receive the training in

scientific publication. From the questionnaire, it could be seen that 15 % of them was very satisfied 85 % was satisfied with the training of scientific publication. Teachers' competency in scientific publication was still very varied. The teachers were very busy with the work of teaching and other additional tasks from school. The ability of computer still needs to be improved. Internet network was also still very limited, in some schools, the internet access was still weak. The team would need to enhance the material, complete it with examples and copy the ingredients and create web pages or blogs to be more easily accessed by the participants in the training. The progress of science and technology makes it easy for teachers to carry out research activities. World development Such amazing science and technology has indeed brought tremendous benefits to the advancement of human civilization. The types of jobs that were previously demanding physical capabilities are quite large, now relatively can be replaced by automatic machine tools. So also the discovery of new formulations of computer capacity, as if it has been able to shift the position of the human brain's ability in various fields of science and human activity. In brief, the progress of current technology has truly been recognized and felt to provide a lot of convenience and comfort for the life of mankind [18].

IV. CONCLUSION

Scientific publication training program teachers cluster 2, Sukaraja District sub-district of Seluma had been running well as the plan. The teachers had completed the task to draw up scientific articles although they had many other activities. The teachers increased competencies scientific publication. The teachers managed to collect the task of the scientific articles. The teachers could meet the requirements of scientific publication to rise in ranks. Teachers' problems in scientific publication could be resolved.

ACKNOWLEDGMENTS

The author expressed his gratitude to: Directorate of Research and Community Services Directorate General of Research, Technology and Higher Education which has helped training funds, the head of Research Institutions and Community Service Universitas Prof. Dr. Hazairin, SH who gave permission and assistance for training facilities, the head of the Seluma district education office who also gave permission for training activities and assisted in implementing training programs, the head of the Sukaraja sub-district education office's technical implementation unit and elementary school teachers in Sukaraja Subdistrict. Furthermore, may all goodness, be blessed by God the creator of the universe.



Fig. 1. (a) Opening ceremony, (b) training, (c) discussion, (d) evaluation.

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