

DEVELOPMENT SCAMPER TECHNIQUE WITH SCIENTIFIC APPROACH IN IMPROVING TEACHERS' WRITING COMPETENCE

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ABSTRACT

The purposes of this study were: (1) to describe the development of techniques SCAMPER with Scientific approach in improving teachers' writing competence; (2) to improve the competence of teachers in writing. This study uses collaborative action research design. The subjects were elementary school teachers who have been certified. A description of action research and advisory research proposal development, implementation of research in their respective schools, the preparation of research reports, and preparation for a research article published in the journal. Analisis data is done by qualitative analysis. The results showed that the SCAMPER technique with scientific approach appropriately carried out in an elementary school teacher in accordance with the procedures that exist in theory, namely: substitute, combine, adapt, magnify, put to other uses, Eliminate, and Rearrange/reverse combined with the activity observed, ask, try, processing, presenting, concluded, and create. The conclusion of this study is SCAMPER technique with scientific approach can improve the writing competence of teachers. It is proved by their understanding of them in the classroom action research in the form of their ability to prepare proposals, acted upon, and prepare research reports increases as the evidence of this research.

Keywords: SCAMPER, scientific, writing

I. INTRODUCTION

Making efforts to improve the quality of education on an ongoing basis has been done by the Government through conventional and innovative ways for every type and level of education. The government has tried to improve the quality of education by improving the professionalism and performance of teachers in several ways: (1) improving educators academic qualifications, (2) improving the welfare of teachers by providing functional benefits, (3) providing assistance to educators of further studies, (4) by holding training and upgrading, (5) establishing group work of teachers, (6) the enactment of Law No. 20 Year 2003 about the national education system, (7) Law No. 14 Year 2005 about teachers and lecturers.

In Law of Government No. 19 Year 2005 on National Education Standards in article 28 clause (3) stated that the educator must have four competencies: (1) pedagogical, (2) personal competence, (3) social competence and (4) professional competence. After achieving the professional teacher predicate, teachers should show improvement of performance. As stated in the Regulation of State Ministry for State Apparatus Reform No. 16 year 2009 about Teacher's Functional Position and credit number, in which (1) Teachers rated their performances on a regular basis (every year) through the Teacher Performance Assessment; (2) Teachers are obliged to follow Profession

Sustainable Development every year; (3) Profession Sustainable Development should be implemented since III / a, and since III / b teacher shall conduct scientific publications and / or innovative work; and (4) To rise from the IV / c to IV / d teachers must conduct scientific presentations. Many teachers, especially primary school teachers suffer from stagnancy of promotion, especially who have reached the rank / class IVa as Executive. They are constrained to comply with the provisions of Executive promoted to Level I or IV / b, ie fulfillment in the field of scientific writing. The promotion stagnation phenomenon is quite disturbing for teachers. It needs to obtain a positive response in order to improve the ability of teachers, which eventually boost the ability of teachers, as well as efforts to improve the welfare of teachers. In responding to these conditions would need to be sought for some solutions to help teachers to improve their professional competence, especially in the case of writing / produce scientific work. One effort to do is the use of SCAMPER technique with a scientific approach.

Based on the background described that the formulation of research problems are: (1) How is the development of SCAMPER techniques with a scientific approach in enhancing the competence of scientific writing of elementary school teachers in the district of Kebumen? (2) Is the SCAMPER technique with Scientific Approach able to upgrade the scientific writing competence of Elementary School Teachers in District of Kebumen? The purpose of this research in general is to improve the competencies of elementary school teachers, especially those already certified as professional educators in writing scientific papers through SCAMPER technique with Scientific Approach. In particular, the aim of this study is to describe the use of SCAMPER technique with scientific approach in improving the competence of elementary school teachers in writing scientific papers.

This study is based on the previous relevant studies. Research by Cahyani (2010: 189), entitled "The Improvement of Writing paper through Model-Based Learning Research on General Courses Indonesian" shows that the model of learning to write papers with research based can improve the ability to write papers and motivate students to improve the quantity and quality of interaction in learning through activities critical reading, analyzing, formulating the problem, researching literature, and meet speakers with interview techniques, distributing questionnaires, observing, recording with the film, revise, present, and to create the exhibition.

Thahar (2002: 1) in the study "Efforts to Improve Skills in Writing Popular Articles via Assembling Model", shows that the assembling model can increase participation and progress of significant results for trainees. Suhartono (2010b) in the study "Creative Productive Learning Strategies to Improve Writing Competence of Popular Scientific Work of UNS PGSD FKIP VI Kebumen College Students" concluded that the Creative Productive Learning Strategies effectively used in improving the competence to write students popular scientific papers.

Suhartono (2011) in the study entitled "Increasing Writing Scientific Journal Article Competence Through Research-Based Learning Model on

Students PGSD FKIP UNS" concluded that Research-Based Learning Model effectively used in improving the competence to write scientific journal articles on PGSD students FKIP UNS.

Improvement competence of scientific writing can be achieved through research, as Suhartono's research results (2012: 100) that the competence to write scientific journal articles can be improved through research-based learning; in this study research-based learning is relevant to the scientific approach. Most of the steps contained in Scientific Approach also included in Creative Productive Learning Strategies (orientation, exploration, interpretation, re-creation, and evaluation). Based on the research results of Suhartono (2010b: 88) Creative Productive Learning Strategies can improve writing popular scientific competence on college students. Creative and productive element is also present in the scientific approach. The scientific approach also has similarities with SCAMPER technique. SCAMPER technique in this study have in common with the model "Assembling" which is one alternative to improve the writing training. This learning model is done by giving an example or model / scientific papers according to the research objectives; then the model is used as a reference for students writing (Thahar, 2002: 3). Assembling Model with varied reading sources can also cause the courage students to write scientific papers (Suhartono, 2010a: 67).

As stated by Passuello (2008) "SCAMPER is a technique you can use to spark your creativity and help you Overcome any challenge you may be facing. In essence, SCAMPER is a general-purpose checklist with idea-spurring questions-which is both easy to use and surprisingly powerful." SCAMPER is a way to help counselors assisting clients and themselves to become more creative (Gladding, 2011).

From some of research finding that have been presented above can be seen of the similarities and differences with this study. The similarity is that all the research related to the skills / writing competencies. The difference with this study lies in the aspect or type of writing. The Previous research have highlighted the skills of writing papers, popular articles, the work of popular science and scientific journal articles, while this study highlight the improvement professional competence of teachers in writing scientific papers. In addition, the difference lies in the independent variables found in previous studies. Previously, the independent variables are in the form of an assembling model, the role of teachers, Creative Productive Learning Strategies, and research-based learning. This study uses independent variable SCAMPER technique and scientific approach. The dependent variable is a scientific writing competence.

One professional competence should be possessed by teachers is to develop professionalism in a sustainable manner by taking reflective action. It is obvious that these competencies can be achieved through research, especially classroom action research while carrying out basic tasks as a teacher. Reflective action reflects teachers' awareness of his responsibility in performing basic tasks in teaching. With self-reflection, teachers will introspect themselves for finding weaknesses and try to find solutions to overcome them. Thus, the spirit to move forward and be better than before always has. Through this research the teachers are expected to improve their professional competence by the preparation of

scientific papers based on research conducted in their respective classes. Furthermore, if they have been able to conduct research and prepare research reports, they are expected to be able to write articles published in scientific journals.

SCAMPER is a technique that can be used to spark creativity and help teachers to overcome any challenges that may be faced in implementing the learning of each student. SCAMPER based on the idea that everything new is a modification of something that already exists (Sudrajat, 2012). SCAMPER is an acronym that each letter illustrates a different way from existing terms to trigger and generate new ideas in learning, whether related to places, procedures, tools, people, ideas, or even psychological atmosphere: S = substitute, C = combine, A = Adapt, M = magnify, P = Put to Other Uses, E = eliminate R = Rearrange / Reverse (Serrat, 2009; Passuello, 2008).

Curriculum 2013 emphasizes on modern pedagogic dimension in learning, using a scientific approach. The scientific approach in study as referred covering observing, asking, trying, processing, presenting, concluding, and creating for all subjects (Kemendikbud, 2013: 4). SCAMPER technique with scientific approach is expected to improve the elementary school teachers' scientific writing competence. By examining various examples of scientific papers, the teachers are able to understand the structure and content of the text. Furthermore, they are expected to be able to replace, combine, adapt, magnify, putting to another function, eliminate or shrink, and reset. These processes are relevant to the process of thinking in Scientific approach that includes observing, asking, trying, processing, presenting, concluding, and creating.

Ghaith (2002: 2) states that writing is a complex process that allows the authors to investigate or examine ideas and concepts, and make it appear and concrete. Samra (2001: 1) states "A well-Written piece can be Described as incorporating elements of writing in such a way that a reader can experience the writer's intended meaning, understand the writer's premise, and accept or reject the writer's point of view". Scientific writing is writing a series of activities based on the results of a systematic assessment based on the scientific method, to get an answer scientifically, to the issues that came before. Furthermore, it is stated that to clarify the scientific answer that will be studied, writing scientific papers have to dig up the treasures of the library, in order to completing the theories or concepts that are relevant to the issues that want to be answered (Suyanto and Jihad, 2009: 27). Scientific journal articles or often called scientific journal usually is a summary of research findings or in the form of ideas development based on literature review. Therefore, in order to generate the writing of the article, a person should take action research in advance or study the related documents.

Teacher's creativity in creating a scientific paper is not enough only by reading the theory, but they need a model or examples and practical guidance. This is consistent with the results of research by Suhartono (2013) which states that many elementary school teachers who have difficulty in writing scientific because of a lack of understanding, less example and practical guidance. Besides, they need motivation and sustainable assistance.

II. RESEARCH METHODS

This study uses a qualitative research design. This type of research is research and development. The thing which is developed in this study is the concept of scientific writings into a prototype, and then become a technique. The resulting technique was developed further into a subject matter that can be used by teachers as a guide in preparing scientific work to improve their competence of scientific writing. This research subjects are the the teachers in the district of Kebumen, expert in the fields of education / research, officials of Education Board in District of Kebumen on FGD. The research was conducted for one year, ie from March to December 2014. The location of the research is in District of Kebumen, Kebumen, Central Java Province.

The steps of this study are: (1) identifying the problems of primary school teachers in improving scientific writing competence; (2) compiling the subject matter book of scientific writings; (3) guiding primary school teachers in composing the research proposal ; (4) composing research reports; and (5) publicizing the research results.

Data collection techniques used were observation, interviews, and tests / assignments. Data collection tool used in this study were (a) the field notes, (b) interview guidance, and (c) an evaluation in a form of a research proposal, research reports, and scientific journal articles as the teacher's task.

Data were analyzed using qualitative analysis interactively, includes three grooves activities going on simultaneously and continuously during and after data collection, namely (1) data reduction, (2) display / presentation of data, and (3) conclusion / verification (Miles & Huberman, 1992). As for the validity of the data, this research used triangulation methods including triangulation theory, sources, and data collection techniques.

III. RESULTS AND DISCUSSION

A. Result

This research was conducted in Cluster Rujak Beling, UPT Dikpora Unit District of Kebumen, Region of Kebumen. Rujak Beling group consists of five schools, namely 4 public elementary school and 1 private elementary school. The number of teachers who are civil servants in the region of cluster Rujak Beling as many as 33 people. Of these 16 people who are already certified and who have not been certified are 17 people.

Referring to the problems faced by the teachers in the field, the problems they face in writing scientific papers, particularly carrying out classroom action research experienced by all the teachers who were participants. As revealed by school supervisors and principals that lately these teachers, especially those who are already became IV-a level suffered from stagnancy of the promotion, and even some have more than ten years are no longer promoted. This condition is caused by the rule that for a promotion they should make scientific work. In fact, many of them are not be able to make the scientific work.

The inability of teachers to produce the scientific work is influenced by many factors. First, the official duties of teachers are very dense and have seized most of their time in the completion of the task. In addition to these duties, they also have to carry out extracurricular activities as the afternoon tasks. Thus, these conditions pay much time, effort, and attention to them. At night there is also the task of correcting students' work so there is no time to think of writing activities. Actually, the teachers have a high enough interest to make scientific work or PTK. However, high interest and enthusiasm which are not matched by their knowledge and basic understanding of scientific writing will not have a significant effect to make it happen. Therefore, knowledge and understanding of scientific writing is really needed by them and it is highly expected the realization soon.

Before researcher presenting the material, He asked some questions to the teachers about how they address the fulfillment of the demands of professional competence in the form of scientific papers. Based on the obtained information, in fact they have been trying to follow the seminar or workshop about writing scientific papers. However, after the completion of activities, they still find it difficult to apply what they got in real life practice. The theory they obtained has no significant impact in real life practice.

Mentoring conducted on the afternoon of Monday, 14.00 to 16.00 in PGSD FKIP UNS Campus Kebumen. Actually, the initial plan of this project will be held in every Saturday at 11:00 to 13:00 at the time of KKG, but because there is a programmed schedule of KKG activities. Then, the research activities transferred on Monday. Mentoring for teachers began with a theoretical explanation of classroom action research. To facilitate their understanding, researcher provided guidelines for the preparation of scientific papers that have been produced/developed previously. Through classical discussion and question-answer, the researcher tried to facilitate their difficulties in preparing scientific papers. Subsequently, they were told to read and examine examples of research proposals composed by students of PGSD. By looking at existing examples, they were expected to understand the contents of the writing pattern of a research proposal.

Based on theoretical understanding gained in the previous meeting with the example given, they try to apply the problems experienced in their respective classes to be appointed as a study. They tried to identify the problems that occur in the classroom, then analyze, and think of solutions to solve them. At first, they looked for and found an appropriate title to the problems in their class. These titles are communicated and discussed with researcher as mentor. Thus, they were better informed about how to choose an appropriate research title. Based on the selected title, they were given the task of preparing the first chapter (introduction) as homework. The next meeting each of them brought the concept of chapter I discussed with colleagues and researchers. As a result, they have largely understood what was described in chapter I. Furthermore, they tried to modify the contents of chapter II and chapter III.

These activities require a longer time caused the planned schedule were missed not as planning by some bustles of teachers in their school. Besides, to be

able to write the chapter II and chapter III they need a source or reference in the form of books or other sources. The solution offered by the researchers is to give the participants an opportunity to leverage existing libraries on campus PGSD Kebumen. In addition, they are also directed to seek references from the Internet. Internet use has been very helpful to the teachers. Let alone, almost every school now existing Internet network, either connected via cable telephone network or modem. By directing how to take advantage of Internet resources that they can continue the search of writing material in each school or even at home.

Assistance activities carried out by referring to SCAMPER technique which is based on the idea that everything new is a modification of something that already exists. In addition, this technique combined with a scientific approach that gives participants a chance to do an activity with scientific procedure, which includes activities like, observing, asking, trying, processing, presenting, concluding, and creating. The results of the implementation of the research conducted by teachers later compiled in the form of research reports and articles published by the scientific journal with ISSN certified. This scientific publication is expected to help teachers in the fulfillment of professional competence, particularly scientific writing that will facilitate their promotion.

B. Discussion

Article 28 clause (3) Regulation No. 19 Year 2005 about National Education Standards require teachers to have the competence that includes pedagogical competence, personal competence, professional competence, social competence. Supposedly after the teacher has successfully achieved the professional teachers predicate, they should show improvement of performance. Many teachers, especially primary school teachers suffer from stagnancy of promotion, especially who have reached the rank / class IVa level as Executive. They are constrained to comply with the promotion of Trustees of the First Level IV / b, ie fulfillment in the field of scientific writings, especially conduct classroom action research to improve learning.

Application of the SCAMPER technique with scientific approaches to teachers in carrying out research as a scientific paper showed a significant positive impact. By following the steps of scientific approach, gradually they became aware of the scientific work substance, especially PTK. However, their confidence are mostly still low. Therefore, motivation and mentoring becomes a matter of very great influence and expected by them. Through intensive assistance, they grow up and become open-minded for trying to understand the problems of learning in class, analyzing, and searching/finding a solution.

Actually, the teachers have been doing the steps of classroom action research, but it is implemented in the classroom without a chance to write it down systematically. This happens because they find it difficult on how to write it down. By studying examples of work that is already there, they were finally able to understand what and how to do research and write.

IV. CONCLUSION

Based on the exposure in the previous section, it can be drawn as conclusions of this study as follows.

1. SCAMPER technique with Scientific Approach is undertaken in accordance with the procedures of primary school teachers who exist in theory, namely: substitute, Combine, Adapt, Magnify, Put to Other Uses, Eliminate, and Rearrange / Reverse combined with the activity observing, asking, trying, processing, presenting, concluding, and creating.
2. SCAMPER technique with Scientific Approach can upgrade the scientific writing competence of elementary school teachers in the district of Kebumen. This is evidenced by their understanding in conducting the classroom action research. This is demonstrated by their ability to produce research proposals that can be practiced in the following semester.

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