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**THE EFFORTS TO IMPROVE TEACHER ABILITY OF STATE ELEMENTARY
SCHOOL JETIS 1 OF YOGYAKARTA IN DEVELOPING A SCIENTIFIC WRITING
THROUGH A COLLABORATIVE APPROACH**

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Abstract

This research was aimed: 1) to know whether a collaborative approach could deliver a good service for state elementary school in developing a scientific writing; and 2) to know state elementary school teacher ability improvement in developing a scientific writing through a collaborative approach namely: in proposal composition ability, proposal enforcement and teacher PTK/PTS report composition. This was a School Action Research. This research subjects were class teachers of State Elementary School Jetis 1, especially those who have had IV-a functional position. Data collection used a teacher behavioral sheet to obtain information on teacher assistance process. To obtain the information on the assistance success by the researcher it used a questionnaire to obtain information on assistance enforcement by the researcher in composing scientific writing used observational sheet of scientific writing work composition. Based on the research enforcement by using a collaborative approach it showed that: 1) each teacher could complete PTK/PTS proposal suitable with PTK criteria and manual expected; 2) teacher paradigm on difficulties to write PTK according to KTI and PTK manuals changed and was not desperate to materialize proposal suitable with problems they are facing in class; 3) the teachers had a high willingness to innovate learning in next opportunity by composing new proposals; 4) the teachers could have learned according to syntaxes/phases in the actions they used in the research; 5) the teachers could live a learning environment to be enjoyable learning and could also conduct a student center learning; 6) the teachers could have chosen learning methods and models according to teachers roles as a learning facilitator; 7) the teachers gave a wide opportunity to think, discuss and communicate concepts as well as result obtained in efforts to overcome the teacher difficulties. Through this research it could deliver an interactive environment between teacher and researcher in efforts to overcome their difficulties. The teachers were more enthusiastic to attend each meeting and felt the difficulties facing in learning could be overcome.

Keywords: *teacher ability, scientific writing work, collaborative*

Introduction

Teacher is a professional labor having function, role and position which are very potential to achieve educational vision of 2015, creating intelligent and competitive Indonesian people. As mandated in Law Number 14/2005 on Teacher and Lecture indicating that teacher should have academic qualification, competence, educational certification, physical and spiritual health, and ability to realize national education goal, then profession of teacher needs to be developed sustainably so that he/she becomes professional and prestige teacher.

Professionalism level of a job, in effect, is measured from scientific and theoretic complexity used as a base (Diktendik, 2008: 1). Along with rapid change and development of science and society needs, then sciences become base of a profession required to be developed continuously. A teacher is required to be more professional to not only teach but also continuously increase competence in order to adapt to technological progress by applying applicative learning pursuant to scientific and technological advance. Various scientific activities must also be continuously conducted by teacher to develop sciences.

Competence of teacher can be increased by scientific work. Bambang and Rati (2005:

1) defined scientific work as a work of scientist (such as development) who wants to develop sciences, technology, and art that are obtained in library, collection of experiences, research and knowledge of previous individual. Dalman (2013: 5) also stated that scientific work is a work where its contents try to describe a scientific discussion conducted by a researcher. Thus, teacher can develop his/her competence through writing work or report of scientific activities or thought results based on facts, events, and symptoms which are presented accurately as to be responsible for.

Research becomes one instrument or vital medium to obtain sciences, by both studying and verifying theories. Results of research must, then, be written and published. It is done in order to be tested by competent parties and if theory or finding produced has truth and significance, then it will be certainly adopted in the profession sciences. Teacher as profession holder in education should study, present, and apply sciences supporting increase of professionalism; one of them is to increase competence to compile a scientific work.

Scientific work has vital role in trying to develop teacher's profession. Work of teacher profession development is one vital point for teacher to achieve promotion, especially IVa degree or higher, complying with Regulation of State Minister of State Apparatus Empowerment and Bureaucratic Reformation Number 16/2009 on Functional Position of Teacher and Credit Rate of Article 11, point c1, consisting of functional education and training and collective activities of teacher increasing competence and/or professionalism of teacher, Joint Regulation of National Education Minister and State Labor Board Leader Number 14/2010 and Number 03/V/PB/2010 on Instruction of Teacher-Functional Position Implementation and Credit Rate and complying with mandate of National Education Minister Regulation Number 35/2010 on Technical Instruction of Teacher-Functional Position Implementation and Credit Rate. Moreover, according to teacher certification policy, work of profession development is also one vital point of teacher success determinant in achieving certificate.

Problems occurring in Indonesia are associated with compilation of scientific work: compilation of scientific work is still limited. Teacher with Iva degree still experiences difficulties to get next promotion because there are requirements to compile scientific works (Kompas 29th March 2008, p. 12). Teachers are reluctant to compile scientific works because they lack of knowledge and competence on compilation of scientific works. Moreover, many teachers use false PAK because of difficulty to promote from IVa to IVb. It occurs because they have not been able to compile scientific works. Based on the problems, many teachers, it can be indicated that teachers make compilation of scientific works a ghost causing difficulties to take steps to develop their profession because they lack of knowledge and competence on scientific works.

Based on survey and results of discussion with teachers of State Elementary School Jetis 1, some difficulties were found in compiling scientific works, such as: difficulties in determining problems that would be used in compiling scientific works, characteristics and forms of scientific works and requirements of good scientific works to be evaluated when dealing with teacher-functional position promotion. Teachers could not solve the difficulties because they had minimal activity training on compilation of scientific works.

To solve the problems of school, collaborative approach was used by main tasks of lecturer consisting of: listening to, presenting, solving problems and negotiation. Collaborative construction approach conducted to overcome problems of elementary school teacher competence in developing scientific works is based on assumptions used in cognitive psychology. View of cognitive psychology is convergence between behaviorist and humanistic views. If behaviorist view more emphasizes on instrumental view of environment, then humanistic view sees learning as efforts to find anything. If the view is collaborative, main approach of constructor consists of listening to, presenting, solving problems and negotiation.

Benefit of elementary school teacher construction in collaborative approach is to increase competence of elementary school teachers in developing scientific works. Elementary school teachers can compile and develop scientific works such as research of Classroom/School actions. Teachers are more creative in trying to solve learning problems in school so that quality learning is higher. Teachers are expected to be more self-reliant to prepare IV b functional position promotion, teacher certification and increasing quality school through activities to develop scientific works.

Based on background of problems mentioned above, it is necessary to do a research to find that collaborative approach can give good services to elementary school teachers in developing scientific works, namely, in activities to compile a proposal, proposal performance and report compilation of PTK/PTS teachers.

RESEARCH METHODS

This research is research of school actions. One cycle of school action research consists of: (1) planning, (2) implementation/action, (3) observation, and (4) reflection which is implemented in cycles. These activity stages continuously repeat until a problem is assumed to be solved. Each end of cycle is reflected to determine success in action and improve further actions. More or less cycles in School Action Research depends on solution of researched problem and indicator of research success.

This research was conducted in State Elementary School Jetis 1 of Yogyakarta. This school is located in Jl. Pasiraman No. 2, Cokrodiningratan, Jetis, Yogyakarta 55233. This research was started in July 2013 and ended by compiling report in December. Subjects of research were teachers of State Elementary School Jetis 1 with three persons having IVa functional positions. To gain information on process of accompanying teachers, teacher behavior observation sheets were used. To determine teacher behavior and implementation of researcher accompanying in research, scoring scales were used in two choices (yes with score 1, no with score 0). To gain information on success in accompanying of researcher questionnaires were used. To gain information on implementation of accompanying of teacher in compiling scientific works, observation sheets of scientific works compilations were used. To determine truth of compilation of scientific works, adaptation scoring scales were used, the scales were derived from Educator Profession Directorate (2006: 27-28) with the following criteria: 5 (very good); 4 (good); 3 (medium); 2 (minimum); 1 (very minimum).

RESULTS AND DISCUSSION

This research of school actions was conducted for four cycles. The results of research were reported for each cycle as follows:

1. Cycle I

Cycle I was conducted in activities of proposal compilation of teacher PTK.PTS starting from determination of problems to research methodology and how to arrange research instruments of PTK/PTS.

a) Planning

Planning of school action research in State Elementary School Jetis 1 of Yogyakarta consisted of the following activities: (1) Researcher and teachers discussed to find information on problems teachers faced. Results of discussion with teachers are agreed for problems of compilation and development of scientific works; (3) preparing materials and examples on scientific works complying with guide and can be evaluated in functional position evaluation; (4) designing performance of teacher accompanying on scientific works and classroom action research; (5) arranging teacher observation

sheets to see teacher behavior in collaborative approach; (6) arranging researcher observation sheets to see researcher services to teacher in collaborative approach; (7) arranging observation sheets of scientific works documents; (8) arranging questionnaires to understand accompanying conducted by researcher; (9) arranging event note formats to note important events in compiling scientific works; (10) arranging design of teacher PTK/PTS compilation performance; and (11) arranging schedules of collaborative performance and accompanying.

b) Performances of actions

Performances of actions in this research are: (a) lecturers present perception for materials/problems as construction target. Teachers also give information on problems/difficulties in compiling scientific works and PTK facing teachers, from both understanding and application as well as how to research until formation of classroom action research report. (b) Teachers give perspective responses from lecturers concerning materials/problems as construction targets that have been presented. Most of teachers give positive responses, realize their difficulties in compiling scientific works, especially from designing proposal to performance and compiling PTK/PTS reports required in promotions of functional positions from IV a to IV b. Teachers find that they have frequently got information of PTK and scientific works through education and training or seminars; however, they cannot have been able to catch purpose and performance of PTK and scientific works (KTI) pursuant to guidance and criteria that can be received as requirements of promotions of functional positions; (c) Lecturers listen to responses or opinions of teachers. Based on opinions of scientific works compilation participants of teachers, in fact, teachers cannot catch essences and procedure of scientific works and PTK and how to compile PTK proposal, performance of PTK, up to compilation of PTK report so that it is necessary to perform collaborative accompanying and approach. Teachers realize that they need accompanying and addition of vision/information supporting creative ideas. Teachers start to interest in compiling PTK/PTS in order that they are able to solve problems occurring in performance of learning in classroom through simple research. Yet, teachers have not understood some items of scientific works compilation components, especially PTK; (d) Lecturers and teachers propose alternative problem solving. Based on results of discussion with teachers and lecturers, alternative problem solving requires lecturers start to implement activities from socialization for scientific works (KTI) and classroom/school action research (PTK/PTS), compilation of PTK/PTS proposal, and giving offer to teachers of State Elementary School Jetis 1 of Yogyakarta who want to continue creation of PTK/PTS report in specified time. Lecturers give letter of agreement to teachers who are ready to compile PTK/PTS proposal until creation of PTK/PTS report complying with the specified time; and (e) lecturers and teachers negotiate to solve problems. Lecturers and teachers agree schedule of meeting and accompanying of proposal compilation and improvement of what they have compiled, it is expected that all teachers solve problems well possible. Lecturers urge seriousness of teachers in performing the improvement.

c) Observation

Results of teacher accompanying performance observation in compiling scientific works, i.e. PTK/PTS by researcher in Cycle 1, indicate that activities of accompanying performance by lecturers through collaborative approach in compiling scientific works such as PTK/PTS for teachers of State Elementary School Jetis 1 of Yogyakarta have been implemented as planned. Moreover, implementation of performance is complying with the planned schedule.

Results of teacher activities in following activities of scientific works compilation

accompanying, i.e. PTK/PTS through collaborative approach indicate that (1) teachers still experience difficulties in adding problems supporting research performance; (2) teachers are still doubtful in making decisions on action which will be taken in research; (3) teachers are still confused for quantity of formulations of problems which will be solved; (4) have been complying with formulations of problems; however, indicator of success has not appeared clearly; (5) teachers are still affected by other formulations of research problems; (6) teachers still feel difficulties in developing paragraphs and correlations between sentences and they are still false in writing references and quotations; (7) teachers are still confused for PTK Cycle performance; (8) teachers feel difficulties in arranging instruments, especially teacher observation sheets and way to fill column of observation sheets; and (9) Title has been consistent with adopted problems; however, initial title has not attracted readers.

Based on the results of observation for scientific works, i.e. PTK/PTS compiled by teachers in Cycle I, indicate that results of observation evaluation for scientific works proposal, i.e. PTK/PTS, teachers still find weaknesses such as: (1) in problems of proposal on clarity of problems formulations (score 3 with sufficient category) and clarity of reasons (score 2.5 with sufficient category); (2) way to solve problems, especially action appropriateness (score 3 with sufficient category); (3) formulations of problems, i.e. detail rate of formulations (score 2.75 with sufficient category) and focus of action (score 2.5 with sufficient category); (4) goal of research on appearance of clear research success indicator (score 2.5 with sufficient category); (5) study of literatures, i.e. in basic relevance rate of action theory with problems of research (score 2.75 with sufficient category) and rate of problems solution argumentation clarity (score 2.5 with sufficient category); (6) research method, i.e. in clarity and appropriateness of action in each Cycle stage (score 2.75 with sufficient category), consistence with PTK steps (score 2.25 with sufficient category), and appropriateness of instruments and ways to record results of action (score 3 with sufficient category); and (7) general criteria, i.e. clarity of title, brief, showing problems, action to take (score 3 with sufficient category).

d) Reflection of Cycle I

After processes of collaborative accompanying and training take place, and teachers have compiled proposal and research instruments of PTK/PTS, researcher evaluate product of proposal of PTK/PTS that has been compiled by teachers. There are weaknesses and problems found in Cycle 1. Then activities of scientific works compilation accompanying, i.e. PTK/PTS, use collaborative approach with the following changes.

- (1) In problems of proposal on clarity of problems formulation and clarity of reasons. Researcher suggested that formulations of problems must be associated with problems occurring in classroom which is attempted to improve learning. Background should contain idealism of classroom problems, problems in classroom and solution to cope with the problems by performing classroom/school action research.
 - (2) Ways to solve problems, especially appropriateness of action. Based on the results of teacher proposal. Teachers have not shown ways to solve problems clearly through action which will be taken according to classroom problems facing teachers. Researcher suggested that teachers should adapt to problems and action which will be taken in research.
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- (3) Formulations of problems, i.e. formulation detail rate and focus of action. Formulations of problems that may be written by teachers have not reflected action focus of research that will be taken by teachers and also teachers have not formulated, in details, problems associated with title of research of PTK/PTS adopted by teachers. Researcher suggested that formulations of problems lead to title and problems being focus of research and way/solution action.
- (4) Goal of research on appearance of clear research success indicator. Researcher suggested that goal of research contains research success indicator using criteria of success that will be described in proposal as references to research survival.
- (5) Study of literatures, i.e. basic relevance rate of action theory with research problems and argumentation clarity rate of solutions to problems. The researcher suggested that the study of literatures should contain focus of research problems and action taken in research as to have relevant relationship with title adopted.
- (6) Research method, i.e. clarity and appropriateness of action in Cycle stage, consistence with PTK steps and appropriateness of instruments and ways to record results of action. The researcher suggested that teachers should observe guidance of PTK, especially in Cycle steps of PTK/PTS consisting of designing, performing, observing and reflecting/ teachers observe contents of each Cycle step arranged concerning whether they have been consistent with action that will be used to solve research problems. Teachers still feel confused in arranging instruments that may be used to observe performance of research, especially observation sheets of teachers and students so that researcher suggested that teachers refer to steps of action that will be taken in performance of PTK/PTS.
- (7) In general criteria, i.e. clarity of title, brief, showing problems, action that will be taken.

2. Cycle II

Cycle II is implemented in activities of proposal ,performance of teacher PTK/PTS in leaning of each teacher in classroom, from planning of teacher PTK/PTS to reflection, especially when teachers implement learning in classroom and researcher becomes research collaborator of PTK/PTS.

a) Planning

Cycle II is implemented for results of cycle I reflection. Changes that will be made in cycle II are to solve the following problems: (1) in proposal problems on clarity of formulations of problems and clarity of reasons; (2) ways to solve problems, especially appropriateness of action; (3) formulations of problems, i.e. rate formulation detail and focus of action; (4) goal of research on appearance of clear research success indicator; (5) study of literatures, i.e. basic relevance rate of action theory with research problems and clarity rate of problem solution argumentation; (6) research method, i.e. in clarity and appropriateness of action in each Cycle stage, consistence with PTK steps, and appropriateness of instruments and ways to record action results; and (7) in general criteria, i.e. clarity of title, brief, showing problems, action that will be taken.

b) Action

Accompanying of scientific works compilation, i.e. PTK/PTS, through collaborative approach in Cycle II, is implemented, with the following steps: in proposal problems, researcher accompanies in arranging problem solution in order that problem solution made is associated with problems occurring in classroom that may be tried to have learning improvement. Background should contain classroom problems idealism, problems in classroom and solution to overcome the problems by performing classroom/school action research.

Researcher accompanies teachers in arranging ways to solve problems, especially

appropriateness of action in order that teachers can arrange ways to solve problems by adapting between problems and action that will be taken in research. Researcher accompanies teachers in arranging formulations of problems, i.e. rate of formulation detail and focus of action in order that formulations of problems written by teachers reflect focus of research action that will be taken by teachers and can also, in details, formulate problems associated with title of research of PTK/PTS adopted by teachers. Researcher rechecks in order that formulations of problems lead to title and problems being focus of research and way/solution action.

Next steps are that lecturers should accompany teachers in formulating research foals as to show clear research success indicator. Researcher recheck goals formulated by teachers, that have been included in research success indicator using success criteria that will be described in proposal as to be used as reference for research survival.

Researcher accompanies teachers in arranging study of literatures, i.e. in basic relevance rate of action theory with research problems and rate of problem solution argumentation clarity in order that arranged study of literatures contains focus of research problems and action that will be taken in research as to have relevant relationship with brief title. References used are pursuant to problems being focus of research in title and using current references.

Researcher accompanies teachers in determining research method, i.e. in clarity and appropriateness of action in each Cycle stage, consistence with PTK steps, and appropriateness of instruments and way to record results of action. The researcher accompanies teachers in reviewing guidance of PTK, especially in Cycle steps or observing contents existing in each Cycle step that has been arranged concerning whether it has been consistent with action that will be used to solve research problems. Researcher accompanies teachers in arranging instruments that can be used to observe research performance, especially observation sheets of teachers and students so that observation sheets arranged by teachers lead to action steps that will be taken in performance of PTK/PTS. In general criteria, researcher accompanies teachers in reviewing again success criteria of research tile of teacher PTK/PTS in order to be consistent with specified time until fulfillment of success indicator/focus of problems in classroom are coped with.

c) Observation/monitoring of action

In general, performance of lecturers accompanying teachers in compiling scientific works, i.e. PTK/PTS, through collaborative approach, has worked well. Activities of lecturers run fluently complying with design of Cycle II action planning. Lecturers accompany teachers complying with agreement so that problems or weaknesses of PTK/PTS proposal compiled by teachers can be improved. Teachers have felt able to catch what should be done.

Collaborative performance in compiling scientific works, i.e. PTK/PTS of teachers of State Elementary School Jetis 1 of Yogyakarta, has been conducted as planned. Performance of this scientific works compilation is conducted complying with schedule that has been planned. Based on results of teacher activities observation in implementing performance of accompanying in compiling scientific works, i.e. PTK/PTS, through collaborative approach, Cycle II has worked complying with construction and direction planned by lecturers/researcher.

Based on the results of observation for scientific works, i.e. PTK/PTS arranged complying with suggestions and opinions agreed together. Teachers feel that collaborative accompanying, difficulties facing teachers in compiling PTK proposal,

can be coped with and they have high spirit to know way to solve problems in classroom by doing research based on proposal they have compiled alone.

d) Reflection

Based on problems that have been discussed with lecturers, teachers have caught and improved and performed solution offered/agreed together as to not face new problems. Teachers feel happy and receive each of suggestions and solutions of lecturers because they are found easy to perform research of teacher PTK/PTS. Teachers also feel gaining new knowledge during they do not know through training activities of teachers before.

3. Cycle III

Cycle III is continuation of implementation of PTK/PTS proposal that has been compiled by teachers in Cycle I and Cycle II. The Cycle III is implemented in performance of learning activities to solve problems adopted by teachers in PTK/PTS of teachers. Moreover, after each end of Cycle I/Cycle II, PTK/PTS of teachers in implementing learning, is continued by accompanying of lecturers to compile report of Cycle I/Cycle II of teacher PTK/PTS.

a) Planning

In Cycle III, the following are implemented: (a) researcher study compliance of instruments with action taken by teachers in learning planned for action of PTK/PTS of teachers; (b) researcher designs schedule of performance accompanying for three teachers in performing action of PTK/PTS in classroom; (c) researcher prepares items needed to observe action of teacher PTK/PTS, i.e. instruments of teacher and student observation arranged by each teacher; and (d) researcher prepares documentation to document performance of activities.

b) Acting

Acting of research PTK planning for beginner lecturers has been performed according to plan that has been arranged by the researcher. After learning /activities of Cycle I/Cycle II of teacher PTK/PTS took place, then researcher takes action to find performance of action that has been arranged by each teacher. Acting of accompanying by lecturers in implementing classroom/school action research proposal of teachers in learning in classroom through collaborative approach in Cycle III has been implemented as scheduled and planned and leading to PTK/PTS action plan proposal compiled by teachers.

Acting of collaborative accompanying in implementing classroom/school action research proposal of teachers in learning in classroom through collaborative approach in Cycle III has been performed as planned. However, in acting of Cycle III, some problems and weaknesses are still found, such as: (a) there two of three teachers feel that there are some weaknesses in acting of PTK/PTS that has been performed by teachers, especially in action steps used in PTK/PTS of teachers. Many steps are passed so that they are felt less consistent with action that should be taken; (b) teachers feel that what is implemented has not been consistent with perception of lecturers for classroom action of each teacher; and (c) teachers feel necessary to immediately solve weaknesses in classroom action based on perception of lecturers so that Cycle of teacher PTK/PTS furthermore may become better.

c) Observation of Cycle III

1) Dra. Parminingsih

Dra. Parminingsih wrote classroom/school action research (PTK/PTS). Title adopted in the action research of this school is "Increasing of Competence of State Elementary School Jetis 1 of Yogyakarta in Arranging Learning Performance Plan through Collaborative approach To Initiate Senior Teachers of Academic Year of 2012/2013". Based on the results of observation for accompanying the Head Master (Dra. Parminingsih) in activities of RPP compilation for teachers in State Elementary School Jetis 1 of Yogyakarta, it has worked fluently, has been consistent with steps of collaborative approach. Problems facing in results of RPP compilation that has been arranged by teachers, has not been consistent with what is expected for standard KTSP process.

Research of classroom action is titled Increasing of Language Learning Results, Literature and Java Cultures Through Cooperative Learning with Pair Check Model In Education Participants of VI B Class of State Elementary School Jetis 1 of Yogyakarta, Odd Semester of 2013/2014". Based on observation of research for pair check acting has worked according to model steps of pair check learning; however, change of roles from partner to trainer and from trainer to partner has not worked fluently. Statement made by trainer is frequently out of context provided by teachers.

2) Khamid, S. Pd.

Title of PTK taken is "Increasing of Learning Results of Mathematic Lesson Through Think Pair Share in Students of Class VI A of State Elementary School Jetis 1 of Yogyakarta, Odd Semester of Academic Year of 2-13/2014". Based on the results of observation in acting PTK, Mr. Khamid, S. Pd., has worked well according to steps of cooperative learning model with type of Think Pair Share; however, when acting pair, results of group member discussion were found different so that it is necessary to rework the questions together from start up to

finding and agreeing same answers.

3) Sukemi, S. Pd.

Title adopted is "Increasing of Intention to Learn Mathematics Through Problem Solving Systematic Method in Students of Class V A of State Elementary School Jetis 1 of Yogyakarta, Odd Semester performance Academic Year of 2013/2014. Based on research observation for classroom acting performance Sukemi, S. Pd., i.e. PTK acting by using Problem Solving Systematic Method, has worked well. However, students, in implementing the learning method, experience difficulties, especially in calculation operation steps.

After implementing Cycle I/Cycle II of PTK/PTS, each teacher starts to compile report of Cycle that has been conducted based on reflection. Report of the Cycle is discussed individually with lecturers/researcher.

d) Reflection of Cycle III

Based on the observation and implementation of PTK/PTS proposal that has been compiled by teachers, there are some weaknesses and problems found in Cycle III, then activities of accompanying use collaborative approach with the following changes: (a) lecturers give accompanying to each teacher in formulating solution of problems facing when implementing Cycle and action observed, especially in relation to activities of students; (b) lecturers accompany teachers in reviewing and clarifying again suggestions given in improvement to implement furthermore; (c) lecturers accompany teachers in implementing improvement of reflection in next Cycles; (d) lecturers accompany teachers in finishing report of each Cycle in order that planning in next Cycles is consistent with what is expected.

4. Cycle IV

In Cycle IV, there are improvements of Cycle III performance based on results of reflection on implementation of PTK/PTS of teachers in Cycle I/Cycle II. Cycle IV is implemented in activities of learning for next Cycles in PTK/PTS of teachers to solve problems adopted by teachers in teacher PTK/PTS as to meet indicator/criteria of success. Moreover, after each end of Cycle, teacher PTK/PTS is continued by accompanying of lecturers to compile report of Cycle II/Cycle III of teacher PTK/PTS.

a) Planning

In Cycle IV, the following activities are conducted: (a) researcher studies consistence of action that is taken by teachers in learning in next Cycle by improvement that is designed in previous Cycle, especially in action of teacher PTK/PTS; (b) researcher designs schedule of performance accompanying for three teachers in performing action of PTK/PTS in classroom in next Cycle to give clarification whether it is implemented or not for suggestions/observation agreed; (c) researcher prepares items required in observing/action observation of teacher PTK/PTS, i.e. teacher and student observation instruments compiled by each teacher; and (d) lecturers document performance of the activities.

b) Acting

Acting of research PTK planning for beginner lecturers has been implemented according to plan that has been arranged by the researcher. After learning takes place/activities of Cycle II/Cycle III of teacher PTK/PTS, the researcher performs action to understand performance of improvement action that has been arranged by each teacher.

Acting of accompanying by lecturers in implementing results of reflection in teacher PTK/PTS in learning in classroom through collaborative approach in Cycle IV has been implemented as scheduled that has been planned and led to action planning of PTK/PTS arranged by teachers in next Cycles, Cycle II/Cycle III. Collaborative acting

in activities of accompanying in implementing results of reflection in teacher PTK/PTS is implemented complying with plan. Each teacher has implemented each Cycle of classroom action research and has achieved indicator of their individual research success.

c) Observation of Cycle IV

1) Dra. Parminingsih

Based on results of observation for accompanying of headmaster (Dra. Parminingsih) in activities of RPP compilation of teachers of State Elementary School Jetis 1 of Yogyakarta in Cycle II of PTS has worked fluently and has complied with steps of collaborative approach. Problems facing in results of RPP compilation that has been compiled by teachers can have been finished and RPP that is compiled by teachers after accompanying of headmaster has been complying with expected standard KTSP process. Based on results of observation conducted by researcher for PTK acting using pair check model has worked according to steps of pair check learning model. Solution of improvement in reflection has been implemented well. In steps of pair check, i.e. when changing role from partner to trainer and from trainer to partner has worked fluently. Students can have exchanged their roles well. Questions that are made by students playing role as trainer have been complying with texts provided by teachers and students are more enthusiastic in implementing pair check.

2) Khamid, S. Pd.

Based on the results of observation of PTK belonging to Khamid, S. Pd., it indicates that the acting has worked according to steps of cooperative learning model with Think Pair Share type and teachers have implemented solution for improvement agreed together so that, in this Cycle III, indicator of research success can be achieved by increasing results of learning by students. In pair acting, we do no longer find different results of discussion by members of group. The students feel more –self-reliant in doing mathematics so that, in step of think, we do not find students who are fraudulent in answering questions.

3) Sukemi, S. Pd.

Based on observation by researcher for acting in Sukemi, S. Pd.'s classroom, acting of PTK by using Problem Solving Systematic Method works fluently. Students do not experience difficulties in implementing learning method, especially in steps of calculation operation. Students are more motivated to do essay of mathematics.

After implementing Cycle II/Cycle III of PTK/PTS, each teacher starts to compile report of Cycle that has been conducted. Report in the Cycle is discussed individually with lecturers/researcher through activities of accompanying.

d) Reflection of Cycle IV

Based on problems that have been discussed with lecturers, teachers have caught and improved as well as implemented solution offered/agreed together in implementing Cycle II/Cycle III of teacher PTK/PTS as to not experience new problems and indicator of such of each teacher has been achieved complying with what is expected. Teachers feel happy because implementation of teacher PTK/PTS research and compilation of teacher PTK/PTS report can work fluently. Teachers also feel pride that they are able to finish tasks and have high motivation to write and compile PTK/PTS in next semester to increase credit rate point.

DISCUSSION

Acting of classroom action research is basically an action research that is implemented by teachers in classroom. Stages of classroom action research compilation that has been conducted by teachers have been complying with direction of lecturers. These activities widely find difficulties because, in writing and compiling classroom action research complying with guidance of classroom action research and perception of lecturers must be attributed to other parts of systematic, beginning from title to research instruments. Teachers need to think of practice to do them as to not only teach but also use critical awareness of them to get ready for change process and improvement of learning process. Each step in arranging classroom action research more motivates teachers to take action and think critically in developing theories and rationale for problems facing.

These activities work fluently because each teacher has understood and caught purposes of PTK/PTS compilation. In this stage, teachers feel motivated and gain brightness to overcome difficulties felt in compiling scientific works such as PTK/PTS. Teachers are enthusiastic and diligent to do accompanying in compiling scientific works, PTK/PTS. After accompanying is implemented, teachers seem enthusiastic, diligent, and feeling pride that they have finished tasks and have high motivation to write and compile PTK/PTS in next semesters to increase credit rate points. Teachers realize that many new components of PTK/PTS can be understood for steps of classroom action research creation through research and collaborative accompanying, that they obtain from training they ever took before.

Initially, implementation of PTK/PTS is not as easy as imagination; however, using collaborative approach, implementation of PTK/PTS becomes easier. Compilation of PTK/PTS needs commitment and patience. Competence to implement classroom action research well can only be obtained by self-habit to implementation. Therefore, teachers need to try to write and compile classroom action research in classroom, both individually and collaboratively. Based on opinions of research subjects, in applying PTK/PTS in classroom/learning, they can obtain the following benefits: PTK/PTS can improve and increase quality learning practices sustainably as to increase quality results of learning, develop skills of teachers, increase relevance, increase efficiency of learning and grow researcher culture in teacher community.

Conclusions and Recommendations

Based on the results of research and discussions that have been described before, through collaborative approach in process of PTK/PTS proposal compilation, implementation of PTK/PTS proposal and compilation of PTK/PTS reports consist of: (1) lecturers present their perception of anything as subjects of target construction; (2) lecturers ask questions to teachers concerning their perception for anything being construction targets; (3) lecturers listen to comments or descriptions of teachers; (4) lecturers and teachers propose alternatives of problem solution; and (5) lecturers and teachers negotiate to make agreement, then it can be concluded that:

1. Compilation of PTK/PTS proposal of teachers

Collaborative approach implemented in process of PTK/PTS proposal compilation, each teacher feels getting brightness and vision on classroom action research and scientific works of teachers. They feel that, through this collaborative approach, teachers feel motivated and more enthusiastic to start compiling PTK/PTS work in any form. Teachers feel satisfied because they can have created scientific works such as proposal of classroom action research that so far they find difficult and fearful. Teachers are more anxious and self-reliant to continue implementation of PTK/PTS proposal that they compile to be i0pl3 in learning. In creating proposal in classroom, they feel that, so far, activities of done learning need activities of self-evaluation of teachers for designed learning.

Through collaborative approach implemented in compilation of PTK/PTS proposal,

it indicates that: (1) each teacher can finish proposal of PTK/PTS complying with criteria and expected guidance of classroom action research; (2) paradigm of teachers concerning difficulties to write classroom action research complying with guidance of scientific works and classroom action research change and not disappointed to create proposal adapted to problems facing them in classroom and (30) teachers have high willing to make innovation of learning in next chances by compiling new proposal.

2. **Implementation of PTK/PTS proposal of each teacher in learning**

Collaborative approach that is implemented in process of PTK/PTS proposal implementation is felt by each teacher, where, initially, teachers felt difficulties because they had not been habited to make learning planning systematically by using innovative learning model. However, after implementing in some meetings of PTK/PTS in classroom, they realize that action applied to activate students and change habit of teachers for years found true, in fact, needs a collaborative approach with lecturers to give understanding and performance of an innovative learning model.

Through collaborative approach that is implemented in PTK/PTS proposal implementation, it indicates that: (1) teachers have implemented learning according to syntaxes/phases in action they take in research; (2) teachers can have survived learning atmosphere into enjoyfull learning and can also implement learning with student center; (3) teachers have owned method and model of learning complying with function of teachers as facilitators in learning; and (4) teachers have given wider chances to think, discuss and communicate concepts and products obtained in learning where, before, it was seldom done by teachers.

3. **Compilation of teacher PTK/PTS report**

Collaborative approach implemented in process of PTK/PTS report compilation emphasizes on individual approach because there are different problems facing each teacher. Collaborative approach implemented in the PTK report compilation indicates that: (1) each teacher has been successful in finishing and compiling PTK/PTS report completely with authentic evidences of acting; (2) each teacher is successful in writing scientific articles of research results such as PTK/PTS that has been implemented; (3) each teacher has organized for seminar of results of PTK/PTS in seminar of city level; (4) each teacher tries to review PTK/PTS that has been arranged based on entries and criteria to be proposed in evaluation of credit rate of teachers. Research using collaborative approach gives interactive mood between teachers and researcher in trying to overcome difficulties of teachers. Teachers are more enthusiastic to follow each meeting and feel difficulties facing in learning can be coped.

Based on results of research of beginner lecturers, the recommendations are as follows: (1) research has been conducted to help cope with difficulties of teachers of group IV a and IV b in compiling scientific works, especially PTK/PTS, as to follow-up using research for teachers in group III d up to IV a; (2) this research should be developed at wider level, i.e. in cluster of schools/group of some schools, KKG (Work Group of Teachers) for each sub-district and KKKS (Work Group of Headmasters) and (3) need of teacher training periodically/sustainably concerning innovative learning, especially cooperative learning model and PBL, learning media, learning strategy, compilation of Learning Performance Plan with cooperative learning model.

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