

## Tutorial Based on Problems and Role Playing to Increase Yogyakarta Open University Students' Understanding of Class Action Research

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### Abstract

Class action research is one of the subjects of Elementary Teacher Education Department in Open University. Students can do class action research when they have conceptual understanding of the subject. The students can construct the understanding when the concepts were related to their preexisting knowledge and real-life situation. The aim of the research described effect of tutorial based on problem and role playing in increasing Yogyakarta Open University students' understanding of class action research.

The subjects were 31 Yogyakarta Open University students. The stages of the method were as follow: (a) the researchers proposed real learning problem to the students, (b) the students in groups cooperatively solved the problem by answering some questions and developing a lesson plan, and (3) the students did the lesson plan in the class (role playing). The problems and the questions were in students' worksheets.

The results of implementation were as follow: (a) the students could explain nature and stages of class action research, (b) the students could develop a lesson plan to solve the learning problem, (c) the students could implement the plan in the class, (d) the students could make class action research proposal and (e) the average scores of the proposal was 78,65 (scale 0–100).

**Keywords:** class action research, problem, role-playing, students' worksheets.

The result of a preliminary study showed that Class Action Research reports of the Open University students as the product of Making Teacher Professional lecture had some mistakes. The mistakes were (1) the background of Class Action Research reports was not supported by the factual data, (2) the students did not analyze the causes of the problems that occurred in the classroom, (3) solutions of the problems might not based on learning relevant theory/results of previous researches; (4) the research reports of the students had not success criteria, or (5) the success criteria of the implementation of the research could not be measured.

Teachers should be able to implement Class Action Research in the classroom and made the report because (a) teachers should implement the research to improve quality of the process and the students' achievements, (b) teachers could grow professionally by doing the research, (c) teachers were more confident in the classroom when they used to implement the research and (d) teachers had opportunity to actively develop their own knowledge and skills (Wardhani, et al., 2007).

Students could implement Class Action Research and make the research reports when they had conceptual knowledge of it. The conceptual knowledge is knowledge that is rich in relationships (Hudojo, 2005). Students need to acquire conceptual knowledge before procedural knowledge (Krulik, Rudnick and Milou, 2003). Examples of the conceptual knowledge in Class Action Research lecture in university are students

associate the research theories to problems are frequently encountered by teachers in the classroom, or they associate the activities in each stage to the nature of the research.

Students who had conceptual knowledge were more able in learning new concepts (Sutawidjaja and Afgani, 2011) and in solving problems (Hudojo, 2005). One of the learning methods that can encourage students to actively learn in classroom and give students experience in solving problem is PBL (Problem Based Learning) (Sutawidjaja and Afgani, 2011). The problem may be question which student had to collaborate with others to solve it. For example, the tutor gave an example of the first chapter of Class Action Research report and asked questions to the students. For example, what are the main contents of the the research background? Furthermore, students cooperatively determined substances that need to be outlined in the background. In the research problem, tutor gave some examples of the research problems to the students. The students posed solutions of each problem and discussed the solutions.

After the students had conceptual knowledge, they practiced to make the research proposal. The proposal has three chapters. Chapter 1 is introduction. The first chapter discuss the research background, the research problem, the aim of the research, the research benefits. Chapter 2 is literature review. Chapter 3 is research method. The third chapter discuss research setting and subject, and research procedures.

Finally, the students need to practice doing the research. This can be done in learning activities of micro-teaching. In the activities, they played role in the class. Tutor role was a teacher who would take acting in class action research. The student role was elementary student or observer. In the role play activities, the students obtained research data. The data can be used by tutor as an example of making chapter 4 (research finding and discussions) and chapter 5 (conclusions and suggestion) of class action research report.

Based on the above, the researchers interested in developing a model of problem-based and role playing in Class Action Research lecture. In the model, tutor used students' worksheets that contained the problems and an example of class action research proposal. The aim of the model was help the students had the ability to perform class action research and to make the research report. Therefore, the the research problem in this study was as follows.

- (a) How to developed a problem-based and role play tutorial model of Class Action Research lecture that satisfies the criteria of validity, practicality and effectiveness?
- (b) How did implementation of the model in tutorial activities that helped the Yogyakarta open university students had the ability of doing the research?
- (c) How did implementation of the model in tutorial activities that helped the Yogyakarta open university students had the ability to made the research report?

The criteria of the model was as follows.

- (a). The model was valid when all the experts stated that the contents and the problems in the model were (a) appropriate to theories of constructivism and class action research and (b) the contents and the problems arranged systematically.
- (b). The model was effective when (a) all the studenets could make the research proposal, (b) at least 70% of the students were active in the class and (c) at least 70% of the students could explain the research phases.
- (c). The model was practical when (a) all the experts stated that the model can be used in class action research lecture, (b) the students could answer the problems and (c) the students had experience to implement the research in role playing activities.

**METHOD**

Type of the research was developmental research. Products of the research were (a) a text book of problem based and role playing tutorial model of Class Action Research lecture (b) the students’s worksheets which contained problems and an example of the research proposal. The research conducted from January to December 2013. The development of the tutorial modes used Plomp phases (Figure 1) (Plomp, 1997). The data analysis technique used model of flow proposed by Miles & Huberman (1992) which includes the following activities.

1. Data reduction. It was done by summarizing data from two experts or observers into a specific statistic such average or percentage.
2. Data presentation. The data displayed in the form of tables and figures.
3. Making conclusions and data validation. Conclusion was done by giving meaning and providing an explanation of the results of data presentation. Framework of giving meaning was criteria of validity, practicality and effectiveness of the tutorial model.

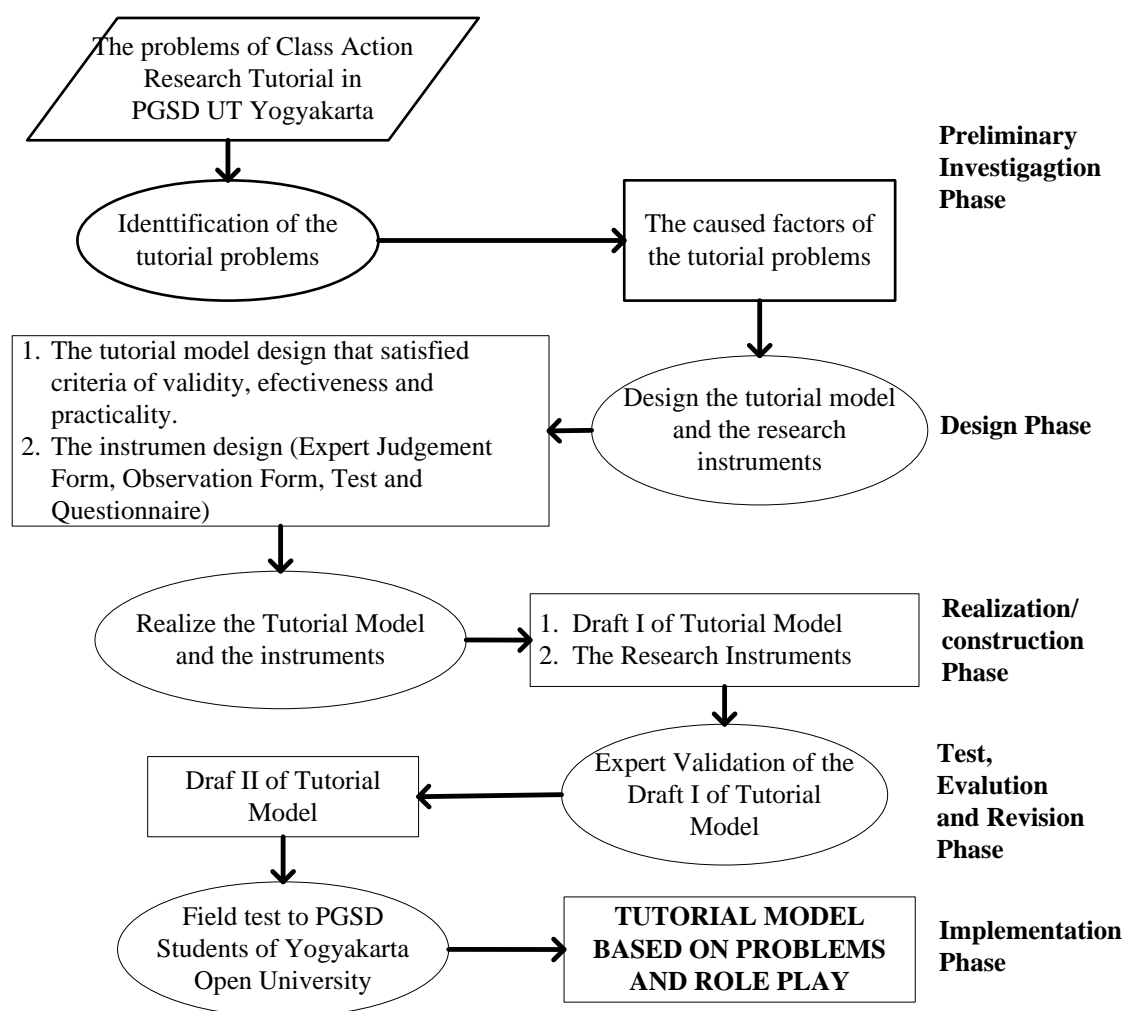


Figure 1. Developmental Phases of the Tutorial Model

## RESULTS AND DISCUSSION

The results of the research were discussed by the researchers based on the phases in Figure 1. The results were as follows.

### Preliminary Investigation Phase.

The researchers discussed constraints faced by S1 PGSD Yogyakarta Open University students who had already taken the lecture in the previous semester. The constraints were the students had not meaningful understanding and had not experience to do the class action research. The constraints caused by the materials of the lecture were studied by the students through meaningless memorizing. They just memorized theories of the benefits, the nature and the stages of class action research without made sense of the theories. Futhermore, the students had not learn how to use the research to solve real problems in the classroom? How to developed a lesson plan to solve the problem? How to made the research proposal?

### Design Phase

Based on the problems in the previous phase, the researchers designed the tutorial model as the solution of the problems and the research instruments. The tutorial model would satisfy the criteria of validity, effectiveness and practicality. The model was tutorial based on problems and role playing. In the phase, the researchers also arranged the order of the materials of the lecture as follows.

Table 1. Materials of the Lecuter and Methods in the Model

Tutorial	Materi	Metode
1	The nature of Class Action Research	Problem Based Learning
2	Chapter 1 of the Research Proposal	Problem Based Learning
3	The cycle of the Research	Problem Based Learning
4	Chapter 2 and 3 of the Research Proposal	Problem Based Learning
5	Developing Lesson Plan 1	Problem Based Learning
6	Implementing Lesson Plan 1	Role Playing
7	Developing Lesson Plan 2	Problem Based Learning
8	Reflecting	Role Playing

The materials were contained in the Students' Worksheets.

### Realization and Construction Phase

At the phase, the researchers developed Draft 1 of the model. The model consisted of the Students's Worksheets, Tutorial Activities Plan and Tutorial Activities Unit. The researchers also developed the research instruments used to collect data. The instruments were (i) expert assessment form, (ii) test and (iii) observation form.

### Test, Evaluation and Revision Phase

The first activity of the phase was evaluate the Draft 1 by two experts. They were expert in education product development and expert in mathematics education. The results of the evaluation are shown in Table 2.

Table 2. The Results of Evaluation by Two Experts

No	Indicators	Experts	
		1	2
1	The learning aims in the Model can be measured and clear.	5	4
2	The problems in the Model is appropriate to the learning aims.	4	5
3	The problems in the Model help students to have meaningful understanding of class action research theories.	4	5
4	The content of the model is appropriate to theories of constructivism and class action research.	4	5
5	The model arrange systematically.	5	4
6	The problems can solved by the students.	4	4
7	The model can used in class action research lecture.	4	5

Description:

1 = strongly disagree

2 = disagree

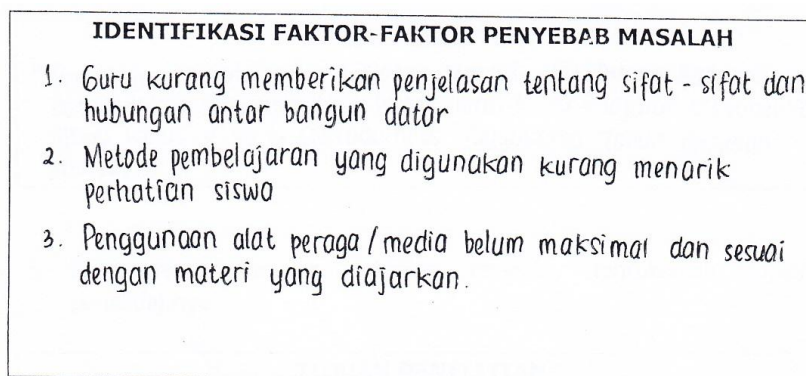
4 = agree

5 = strongly agree

Based on the evaluation, both experts stated that the model meet the validity criteria. In addition, both experts agreed/strongly agreed that the model meet **practicality criteria part (a)**.

### Implementation Phase

In the first meeting, the students constructed meaningful understanding of the nature of class action research. The construction was done by them through group and class discussions. The activities began with the tutor ask real learning problems that occurred in the classroom. The problem was the fifth grade elementary school students do not understand the concept of parallelogram. Based on the problem, the students identified the caused factors of the problem. One of the factors was shown in Figure 2.



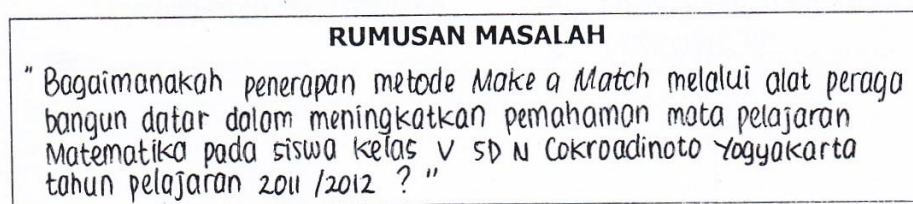
### Translated into English

The caused factors of the problem

1. Teacher gave less explanation of the nature and relation between quadrilateral.
2. The learning method was not interesting for the students.
3. The learning media was not appropriate for the concepts.

Figure 2. One of The Caused Factors of the Learning Problem

Based on the factors, the students determined the research problem as follows.



**Translated into English:**

The Research Problem

"How to implement make a match method with learning media of quadrilateral to increase mathematical understanding of the fifth grade students of SDN Cokroadinoto Yogyakarta in 2011/2012 academic years?"

Figure 3. One of The Research Problem

At the second meeting, the tutor discussed the answers in the first students' worksheet that had made by the students at the first meeting. Based on the answers, the students constructed understanding of developing chapter 1 of the research proposal. Finally, they produced the chapter 1 as the first task of the lecture.

At the third meeting, the students cooperatively solved the second worksheet. The aim of the worksheet was the students had meaningful understanding of the class action research phases. The phases are planning, acting, observing and reflecting. Based on the answers in the worksheet, the students could answer the activities that need to be done in each phase of class action research. Result of the test also showed that 79,7% of the students could explain the phases. Therefore, the model satisfied **the criteria of effectiveness part (c)**.

At the fourth meeting, the students reflected on the answers in the previous meetings to construct meaningful understanding of chapters 2 and 3 of the research proposal. Finally, the students produced the chapter 2 and 3 as the second and third tasks of the lecture consecutively.

At the fifth meeting, the students developed the lesson plan 1. The lesson plan was used to solve the problem which stated in the worksheet. The plan would use in first role playing at the next meeting.

At the sixth meeting, the students implemented the lesson plan 1 in classroom micro-teaching. The researcher played role as elementary teacher. The students played role as fifth grade elementary students or observers. At the role playing, the observers used observation form that have been previously developed by the researchers to get data of students' activities. At the end of the implementation, the researcher who acted as the teacher gave a test.

At the seventh meeting, the results data obtained from the observations and the test were reflected by the students to identify suitability between the data and the success criteria of class action research. The conclusion was the data unsatisfying some points of the criteria. Furthermore, the students identified the factors that caused the

criteria was not satisfied. The result of the reflecting was used to improve the lesson plan 1 become lesson plan 2.

Based on the description above, the students could answer all the problems in the worksheets. It showed that the model satisfy **the practicality criteria part (b)**. In addition, they could do role playing to implement the lesson plan in the classroom. Thus, the model also satisfied **the practicality criteria part (c)**. In general, the model satisfied **the practicality criteria**.

The observation result of two observers showed that 71% of the students were active during discussion. It showed by the students ask, give opinion in discussion or answer questions in the worksheets. It also showed by the students do role playing in the classroom. Thus, the model satisfied **the effectiveness criteria part (b)**.

The students were also asked by the researchers to produce the chapter 1-3 of class action research proposal. The tasks collected on the 3rd, 5th and 7th meetings consecutively. During the tutorial, all the students could make the research proposal. Some titles of the students' research proposals as follows.

1. Efforts to improve the ability of multiplication numeracy of grade 4 students of MI Baleagung by using jarimatika method.
2. Using models example-nonexample to improve writing skills of grade 4 students of SD Saratan Magelang.

The titles satisfied the characteristic of class action research title. The characteristic were (a) there was an effort to improve/fix the problem of learning in the classroom, (b) the concept were fixed by the researchers was specific, (c) the subject of the research was clearly described by the researchers, and (d) there was learning method used to fix the problem. Thus, the model satisfied **the criteria of effectiveness part (a)**. In general, the model satisfied **the effectiveness criteria**.

## Discussion

The purpose of the research was develop the model based on problems and role playing that could help the students have meaningful understanding of class action research. The development of the model used the Plomp phases. The results showed that the model could help the students to construct the understanding. It was shown by the average test scores of the research understanding. The average was 78.65 (scale 0–100). In addition, the students could explain the nature of the research, explain the phases of the research and develop lesson plans used to solve the learning problem in the classroom. All the students also could produce the research proposal consists of chapters 1 to 3. In addition, the model also satisfied the criteria of the model. The criteria were validity, effectiveness and practicality.

The results satisfied the advantages of problem based learning and role playing methods. Sutawidjaja and Afgani (2011) stated that problem based learning could encourage the students to learn actively, to construct meaningful understanding of class action research, to transfer the understanding to real learning problems. Furthermore, role playing gave attractive learning experience and sense of pleasure, and encouraged the students to interact and work together actively.

## CONCLUSION AND RECOMMENDATION

### Conclusion

The results of this study showed that the model of class action research could help the students in constructing a meaningful understanding of class action research. It

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was shown by the students could identify learning problems in the classroom, determine caused factors of the problem, determine the research problem and the title of the study, explain the phases of class action research and develop lesson plans.

In addition, the model satisfied the criteria of a validity, effectiveness and practicality as follows.

1. Research results showed that (a) two experts agreed/strongly agreed that the concepts and the problems in the model was consistent with the theory of constructivism and theories of class action research, and (b) two experts agreed/strongly agreed that the concepts and the problems in the model arranged systematically. Therefore, the model satisfied the validity criteria.
2. Research results showed that (a) all the students could make chapters 1, 2 and 3 of class action research proposal, (b) 71% of the students actively participated in the tutorial activities, and (c) average scores of the understanding test was 79.68. Therefore, the model satisfied the effectiveness criteria.
3. Research results showed that (a) two experts agreed/strongly agreed that the model was suitable to be used on class action research lecture in open university, (b) the student could answer the problems in the model, and (c) the student could do role playing as simulation of class action research implementation. Therefore, the model satisfied practicality criteria.

### Suggestion

Some suggestions were given based on the learning process of the model as follows.

1. Tutor that will use the model should consider the heterogeneity of the students in a group. One group should consist of 4-5 students where 1-2 good achievement students and the others were fair and poor achievements.
2. Tutor that will use the model should consider the discussion process in groups such that each student plays an active role in asking or answering.
3. During the role playing, the teacher used appropriate learning media in solving the problem. It is important because elementary school students tend to learn by using real objects.

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