

THE NEEDS OF CIMAHU AND BANDUNG DISTRICT ELEMENTARY TEACHERS IN TEACHING SCIENCE

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ABSTRACT

This paper presents result the first stage of a three years research project on Development media-based training model. The project aiming at developing media-based teacher training model which in line with teachers need in order to improve elementary school teacher competence in teaching science. In this first stage of research four actions have been conducted, they are: (1) Developing the criteria of science teaching based on study literature, (2) Analyzing teachers needs to perform science teaching, (3) Developing blue print of media-based training model which in line with teachers need and (4) Selecting media which will be used in the training. Research method used in the three years project is *Research and Development (R & D)*. The first stage of research involves the using of questionnaire and observation. Data collected from the questionnaire shows 83% teacher claims that teaching is transferring the knowledge while learning is receiving knowledge. This result indicated that teacher lack of knowledge about nature of science and constructivism in learning. As many as 70% teacher has no experience in science teacher workshop or training. Data collected from observation reveal that teachers in Cimahi and Bandung district need to improve their skill in aspects as follows: 1) Conducting set induction which involve motivate and attract students attention, exploring students prior knowledge as well as stating the aim of instruction; 2) In main activity teacher need to improve their ability to select method which appropriate with the nature of content and students characters, designing and improving the media in their teaching as well as developing questioning and assessment. 3) In closure activity teacher need to improve their ability in making conclusion. All teachers have good relationship with student.

Keyword: media-based training model, teacher competency, research and development.

Introduction

Teacher plays an important role in teaching and learning activity. Students are ready to learn when teachers are ready to teach (Bruner in Anneta & Shymansky, 2005). Furthermore National Commission on Teaching and America's Future (Hammond, 2005) reported: "What teachers know and do is the most important influences on what students learn". At its root, achieving high levels of student understanding requires greatly skillful teachers and schools that are organized to support teachers' continuous learning. To support this aim, government provided teachers' professional development in a form of trainings, seminars as well as workshop. However this effort has not been in a good result as the training are mostly did not meet the participant needs (Widodo, 2006; Wentling, 1996). As a consequence research on teacher needs in conducting science become more important.

Methodology

Method used in this study is *Research and Development (R & D)*, which is started by needs assessment and ended in model validation. Research involved 23 elementary school teachers from 8 elementary schools located in Cimahi and Bandung District.

The study was carried out in steps as drawn in diagram 1.

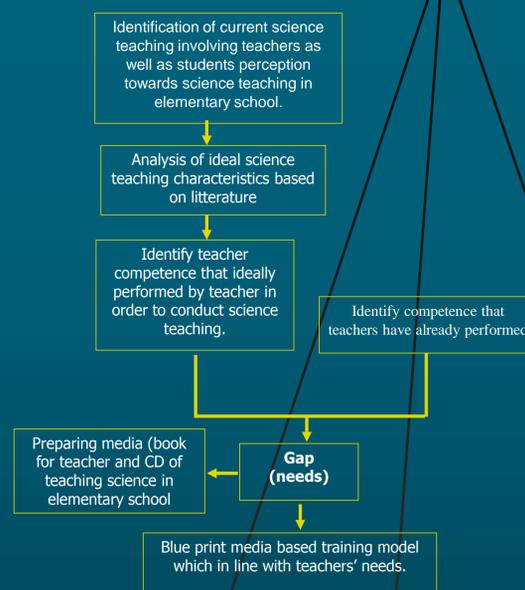


Diagram 1. Steps of Study



Picture 1. Attract student attention in set induction by exposing media



Picture 2. Teacher who has competence in improving students interaction



Picture 3. Students get involved in group discussion



Picture 4. Eighty percent teacher teach science through lecturing.

RESULT

Data gathered from observation reveal that 87% teacher needs to improve their competency in conducting set induction, main activity and closure. In set induction teacher lack of competence in exploring student prior knowledge. This performance indicates that teacher understanding to constructivism is also lack (Widodo, 2004). In main activity, aspects that considered weak were teacher knowledge of science which indicated by low number example given by teachers. However only two teachers who have misconception in her/his teaching. All teachers perform well in a context of relationship with student. In pedagogy teacher competencies that have to be improved are: giving example which relevant with student life (78%), relates content with student experience (91%), use media that will improve students understanding toward science (87%) as well as selecting method, model and approach which appropriate with content and student characteristics (17%). In pedagogy aspect, teacher needs to improve their competency in: questioning and assessment, 96% teacher tends to pose low level thinking and remembering questions. Although only 17% teacher did not use media in their teaching but most of teacher who use media tend to choose two dimension media. Therefore teacher competence in using media is also need to be improved. In closure, teacher had difficulty to make conclusion from their teaching.

Table below is model of media-based teacher training that will be develop in the next stage of research.

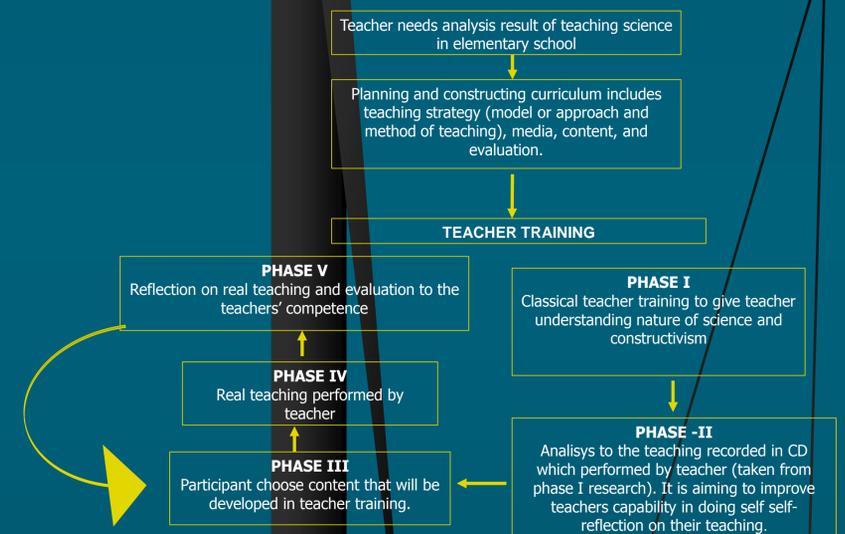


Diagram 2. Media-based Teacher Training Model

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