

## LOCAL GOVERNMENT INITIATIVE ON EDUCATION SECTOR

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### Abstract

The Study of Educational Policy post decentralization related on Professional Development was conducted in three years research. There are two problems posed in the study, they are: what kind of policy that should be provided by the local government to support the improvement of teacher professional development in teaching science of elementary school teachers and what type of teacher training model that should be developed to enhance teacher professional development in teaching science in elementary school. The subject of the study involved 30 elementary school teachers from West Bandung and Cimahi District as well as district Educational government as a policy maker. Research and Development method was apply in the study. The first year study started from elementary school teachers' needs analysis in teaching science as basic information which was used to develop a framework of teacher training model. In the second year, the model of teacher training was developed and tested in small scale trial involving 3 schools and large scale trial involving 15 schools. The policies that should be provided by the local government to support the continuity of the program were also identified in a second year of research. In the third year of the study, the model was disseminated involving elementary schools located in West Bandung and Cimahi. From the study it was reveal that the involvement of local government policy post decentralization can support effectiveness of teacher training program as more schools were get involved in the training program as well as it maintain the continuity of the program. The teacher training model that mixed between traditional model and lesson study model was proved as an effective model to enhance elementary school teachers' professional development in teaching science which was supported by the local government policy.

**Keyword:** *Educational Policy, Teacher Professional Development, Local authority*

### INTRODUCTION

The tendency of many countries move from centralization to decentralization is increasing from year to year. Many people believe that decentralization is a better solution in overcoming problems related to national and regional governmental system, including in educational system (Syah, 2001). It has been more than ten years Indonesia has changed the educational system from centralization to decentralization. Not only by changing the curriculum from centralized curriculum to decentralized curriculum, the educational management system is also changed. Province and district play more important role in improving the quality of education in post decentralization comparing with in centralization period.



One aspect that closely related to the quality of education is teacher. The quality of teacher determines the quality of education. The changing of educational management from centralization to decentralization gave consequences that province and district has to give more attention to improve teachers' quality or known as teachers professional development. The system of teachers' professional development that usually run by national should be also becomes a consideration of local government as now teacher has to educate society based on their local needs in their teaching learning process.

Science is a subject learnt in formal education started from elementary education. In general, science teaching has three goals, they are: provide student knowledge to continue his further study, provide student skills for his social future living, and develop student personality and his principle as well as value to be able to live in society who respect environment and surroundings. Brown (2002) argues that they are four nature of science: 1) Science as scientific process (attitude) that invest belief, values, ideas, objectivity, honesty and respect to others idea, 2) Science as a process or scientific inquiry which used as a method of problem solving and investigation such as: hipotezing, plan and conduct experiment, collect and organize data, evaluate data, conclude the data and make a theory as well as communicate the finding, 3) Science as a product is a fact, concept, theory and law of nature phenomena, 4) Science as technology which is applied to human well being. These four nature of science have to be reflected in science teaching.

Based on the nature nature of science, it can be said that science education has to provide understanding that science is not something which is learn separated from human living but it something that relates to everyday living in our environment. As a consequence, the vision of science education is preparing student for scientific literacy and technology literacy in order to understand himself and his environment which is based on inquiry activity (Rustaman, 2002). With this argument it can be concluded that teaching science is not only teaching of science but also improving students awareness of their nearest environment. On contrary, the real science teaching is far from these practice. Most of teacher conduct teaching in a conventional way. Therefore the vision of science education is far from the vision (Sato, 2006). Most science teaching in Indonesia characterized by *textbook oriented* and teacher centeredness. Sato (2006) claims that although the teaching is occurring, only small number student who learn science as it aimed by the nature of science. Teachers rarely put attention to the importance of teaching science which considered to students' environment and local needs.

Many activities to improve teachers professional development has been carried out by in a form of seminar, workshop and training, however there was no good result from this activities. One that may contribute to this issue is the training given to teacher is not based on their need. In centralization period, the training given by the government (national Ministry of Education) without involving policy from local government may be acceptable, but for post decentralization such kind of training is not any longer appropriate as the local government should know better what is the need of their



teacher. Therefore the policy from local government plays an important role in improving teachers professional development. This researchs aiming to find out what kind of policy that should be provided by the local government to support the improvement of teacher professional development in teaching science of elementary school teachers and what type of teacher training model that should be developed to enhance teacher professional development in teaching science in elementary school.

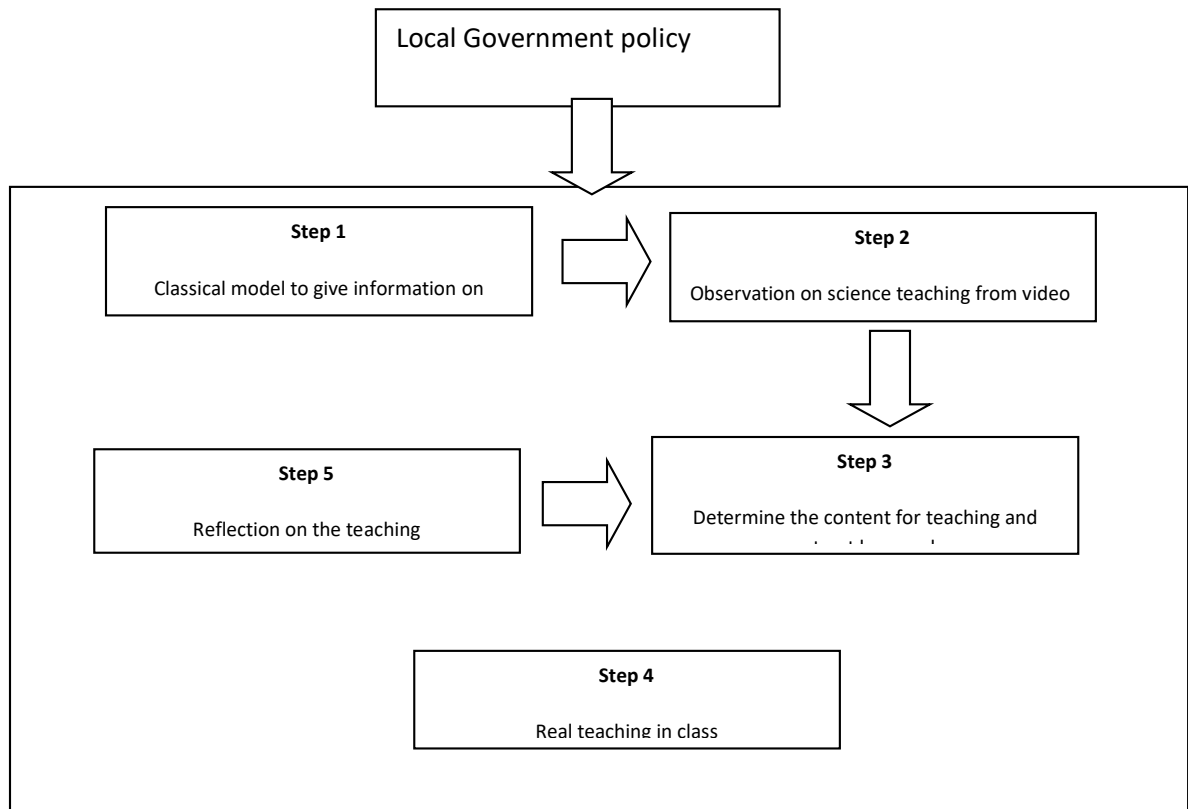
### **RESEARCH METHOD**

The study is developed in two districts, West Bandung and Cimahi. Research and Development method from Borg and Gall (1996) model is employ in the study which was taken in three year reserach. First year was the initial step of the study, the needs of teachers in Cimahi and West Bandung district was assessed and the blue print of teacher training model was developed based on teachers' needs. In the first year the government involvement to the program was set up, to make the program as a continuity program for the next two years. Following stage or second year of the study was developing the model by limited scale trial and larger scale trial in the second year. Finally in the third year, the model was validated and disseminated.

### **RESULT & DISCUSSION**

The study that has been carried out in three years produced model of teacher training which is effectively improve teachers' competence in teaching science. The *Blue print* model produced in the first year of study was constructed based on identification to the teachers' need to improve their competency in teaching science. Ie: content of science, pedagogy and pedagogical content knowledge (PCK). Model developed in this study, is a mixture model of Lesson Study and conventional model. The government involtent to the program of teacher training was also set up. There were two regulation introduced in the this teacher training model. The sceduling of the program and school regulation the financial support for the program. The model can be seen in diagram 1.





The result of limited scale and larger scale trial resulted in improvement of teachers' competency in teaching science by using science process skill. Validation of the model is carried out in the third year of the study showed that teacher who was trained with the developed model has more competency compare with teacher who was trained by conventional model. This imply that the model developed is effectively increase teachers' competence in teaching science.

Teacher training is an important activity aiming at improving teacher professionalism, mostly for elementary school teachers (Schibeci & Hickey, 2004). In USA, teacher professional development through teacher training is used to improve student result and it is become an agenda of Education National Department (Bybee *et al.*, 1997). The teacher training conduced is supported by manuals (Schibechei, 2004). Schibechei & Hickey (2004) argue that proffesional development is closely related with teachers activities as: curriculum developer, curriculum implementer, administrator and assessor as well as techer role as a bridge between school and society.

Kyriakides *et al.* (2008) stated that proffesional development is an important mechanism where teacher are given chance to get involeved deeper with content and pedagogy aiming at reaching high education standard. Commonwealth Australia (1980) identifies there are three categories of teacher development, they are: formal education such as undergraduates and post graduates; teacher training in a form of seminar, confrence, workshop/training; and informal education such as leaning



community, professional community and teaching experience. From the three categories above, teacher training is most significant activity which could improve teacher competency in running class. Australian Labour Department (Schibechi & Hickey, 2004) identifies that class is an essential component of teacher professional development.

Based on the report from National Australian Labour Department, it is known that professional development involving as follows factors: informal factor and effective in plan the lesson, contribution to others such as consultant or people from university, intensity to improve the quality of teaching as well as involving transformation, value and belief into teaching practices (Schibechi & Hickey, 2004). The above argument is supported by Annetta & Shymansky (2005) who stated that professional development which is integrated with teaching practice in teachers' daily job environment will improve teachers' knowledge and skill as well as improve student result. This method is also used in Lesson Study.

Model developed in this study, is a mixture model of Lesson Study and conventional model. Lesson study has been a program of Math and Science Program for many years. In Japan Lesson Study is a part of important activity of the teachers (Wei, Andre, Hammond, 2009). In West Java Lesson study apply in many district could improve teachers' professionalism in teaching science based on the evaluation of Mathematics and Science Faculty MONEV Team. In China Lesson Study is also play an important role in improving teachers competency in science teaching (Wei, Andre, Hammond, 2009). In lesson study model, the involvement of local government is needed to support the continuity of the program. Rules and regulation made by local government contribute has made the program runs effectively (Team Monev FPMIPA, 2009). Scheduling and financial support from local government has made the program run well in Sumedang where lesson study has been carried out for almost 6 years. Local government make scheduling for teachers' MGMP agenda on Saturday teacher do not have agenda for teaching in class but they have to come to the program of lesson study.

The model of the local government involvement in this study was taken from a model of lesson study. The local government involved in financial and scheduling by making policy for school in Cimahi and West Bandung District to send their teachers in the program and give transport to teacher who get involve in the program. This model of local government involvement make the program run as a continue and more efficient program. Kyriadikes (2009) argue that government regulation give contribution to the effective teachers professional development program.

The model that developed in the study is the improvement of lesson study model. In lesson study model, teacher were directly asked to make lesson plan collaborately with supervisor from university (a lecturer), but in this model a mixture between traditional model and lesson study model is applied. The first step of the training is giving important information based on teachers' need that has been identified in the first years of study before teacher do the plan and do the open lesson. This stage is important as teachers in the two districts who get involved in the research has low initiative to explore theory related to the science teaching strategy.



One that may become a constraint for the model is the changing of government regulation that may contribute to the sustainability of teacher training program. As it is known that regulation in governmental system in any part of Indonesia changing frequently. Therefore the most important aspect is giving awareness to the teacher that professional development is not only the task of government or institutions but also it is a needs of teachers to improve him/herselves in order to give better service to their student in teaching learning process.

## CLOSING

Local government involvement in the teacher training has made program becoming a sustainable agenda for teachers professional development. The model developed in the study produced teacher that can run better teaching in science, as it can be seen from the improvement of competency in designing lesson plan and teaching science which means improving their quality related to content, pedagogy and pedagogical content knowledge.

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