# Elementary School Teacher Professional Development through 'Training and Development Personnel' Model and Their Determinants of Success

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Abstract—World Bank research implied that Indonesian teachers' role as agents of change was the lowest in Asia. Due to their ability to drive changes, teachers need a model of empowerment. One is the 'Training and Development Personnel' model. The purpose of this study was to test the efficiency and effectiveness of the training model and find the determinant factor determining the professionalism of teachers as agents of change. This training model was developed through three stages: a preliminary study, the development model of teacher training, continued validation of the model by examining the efficiency and effectiveness of the model. The training was attended 37 elementary teachers, 17 of them were the alumni of SWCU Blended Learning Program. Training takes place in the Teacher Working Group in Wonosobo regency on May 2-10 2013. Preliminary study implied that perceived teacher trainings were inefficient and ineffective, and had not developed Professional competencies yet; The implemented training model is proven to be efficient and effective; There are 2 models of influential determinant: 1) Knowledge Elaboration and 2) Cooperative- correlative to the teacher professionalism as agents of change.

*Index Terms*—Training and development personnel, efficiency and effectiveness, professionalism teachers, knowledge elaboration and cooperative-correlative.

#### I. INTRODUCTION

Teachers must be able to change students' mindset to face the obstacles that they experience and this is why their future role towards their students is significant. The role of teachers is now more complex than ever before, for example, how teachers respond to the diverse needs of students are changing, as a result of such rapid technological developments and the demands of the community to achieve excellence, as well as changes in the social construction of society and globalization [1].

Teachers' role determines students' quality in the future. Up to the present, schools are social institutions which develop and organize students' future for this nation. Therefore, schools and the teachers are expected to develop and renew themselves continuously to be able to adapt to the changes in case of students and society's needs. A teacher is as an agent of change. Teachers bring positive changes for the students and school. Moreover their capability in designing curriculum, learning, and evaluation. Students see their teachers in terms of their personal habits [2]. A research conducted by World Bank stated that Indonesian teacher had the lowest capability as agents of change an in Asia[3]. Their productivity is very low [4] because of several influencing factors.

An inspiring teacher will be able to motivate the students, so that they can optimize their potentials which are beneficial to their future. An inspiring teacher drives changes; yet the perfect condition described above seems contradictory to the World Bank study. Therefore there is a need to empower teachers. Yet, what suitable model of teacher training can be applied in this case? One model of teacher empowerment training is 'Training and Development Personnel' models of Otto and Glaser [5], which is considered quite effective. Secondly what factors influence teachers' professionalism, especially teachers who graduated from SWCU Blended Learning Program?

The problem in this research is 1) to know how the development of the teacher's 'Training and Development personnel' model can be applied to develop teachers' professionalism as agents of change, 2) what determining factors that contribute to the success and professionalism of the trainees?

The purpose of this study is to test the efficiency and effectiveness of the 'Training and Development Personnel' model and find the determining factors that contribute to the success and professionalism of the teachers.

#### II. THEORY

Adie Nugroho [6] viewed that an inspiring teacher is a teacher who is able to cast a positive energies in bringing the breath changes, teachers are able to move, transform and inspire her students, inspiring environment to move forward to bring the character relay Indonesian civilization. He further outlined that inspirational teachers are teachers who do not complain towards facilities' gaps, and still motivate their students' learning, and think out of the box. He is a person who is able to inspire students to be better person intellectually, emotionally, spiritually, and socially. He can create a fun atmosphere science and becomes a pioneer of changes, without being monotonous, stagnant and stuck in the hollow space of academic camouflage. He is a figure who is critical, intelligent, and enlightening and able to promote creative thinking, while not regarding teaching as a routine task.

A teacher should be a source of inspiration for students. According Saprilina [7] inspirational teachers are teachers who provide mental stimulation for students. Mental stimulation provided to students will give more impact to the

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students' understanding, because it gives more and more positive emotional learning mastery. To be an inspiring teacher, one must consider ACJEL (active, creative, joyful and effective learning). By using ACJEL, teachers invite their students to think as well as stimulate students' curiosity.

According to the National Board For Proffesional Teaching Standards [7], an inspirational and professional teacher at least must have the following characteristics: 1) well master the subject, 2) be able to use the right skills, in teaching and learning, 3) able to solve problems related to instructional learning, 4) able to improvise teaching, 5) able to perform well classroom management, 6) has a sensitivity in response to the situation during the learning takes place, 7) has a sensitivity to context, 8) is able to monitor learning, 9) always act on the data, 10) respect others, 11) is educative, 12) are able to facilitate students to achieve the highest performance, and 13) are able to facilitate students to understand the complexities better.

In his role as agents of change, a teacher needs to have at least the basic characters or the characteristics and capabilities that are aligned. It was illustrated beautifully by Fullan [8], that there are four basic capacities that a teacher must have as an agent of change: the development of a personal vision, inquiry habits, the importance of governance and collaboration.

Learning together or the ability to work together is needed. Working in a group is also a characteristic of modern developments—in this case cooperative learning environment. Yet, schools do not support this condition optimally. Cooperative learning brings real life into the students' learning. Although there are complexities and varieties of aspect in cooperative learning. In a broader perspective, teachers can do it hand in hand with the stakeholders.

Education and training as an integral system is a set of components or elements or sub-systems that interact to change the competence of teachers' work so that he/she could do better by learning in education and training activities [9]. Approach in education and training system consists of a series of components of the input, process, output, and outcome. The input is the education and training of participants and lecturers with its competence, budget, time, facilities and infrastructure. Process as a sub-system in education and training is a learning process, evaluation of pre and post education and training, structuring class infrastructure and so on. The output is the result of education and training after completion, among other papers/materials, mastery of specific capacity. Out put is a graduate education and training that has competence in accordance with the expected, certificates, statements of work entered the world, MIS. Out come among others is increased productivity of graduate or graduate contributions made to the organization.

Based on the analysis of the needs of education and training targets are set; Goals should be clear what is to be achieved according to the results of analysis needs. Application of the principle of good study needs to be applied to the learning process can be done quickly and precisely. Basically learning principles are worth considering to apply revolved around five things: participation, repetition, relevance, transfer and feedback. The appropriateness of the teaching technique used depends on a variety of considerations that you want highlighted, such as frugality in finance, program materials, the availability of certain amenities, preferences and abilities of participants, preferences and ability to coach and learning principles to be applied. Having implemented the education and training can be identified teacher benefits, such as increased knowledge and skills as well as skills. Implementation of an education and training program can be said to be successful if the participants transform themselves, with increased capability in performing the task and behavioral changes that reflected for example in attitude, discipline and work ethic.

One of the efforts to improve the competence of teachers is the organization of education and training competency effective [10]. The structure of education and training programs to meet the required competencies need to be designed in a comprehensive manner. Development structure a comprehensive education and training is expected to increase competence as an educator. Some things that should be developed in education and training, including: identification of information related to the competence of the ideal, real competencies owned by teachers in the field, especially the education and training of prospective participants. The map is the basis for the formulation of competency goals, education and training materials, the experience needs to be developed, learning resources, allocation of time for education and training.

The next thing is the use of strategies that are relevant to education and training participant characteristics; packaging education and training materials into forms that facilitate active learning, fun, experience-based, competency-based development, designing effective training scenarios, controlled, and accountable. Relevance of education and training necessary for the implementation of obtaining a positive response from the participants. For these purposes should: planning education and training through an assessment process to the education and training needs.

The use of delivery strategies needs to pay attention to things like the following [10]. Andragogy approach based on the application development experience and performance; Experience participant education and training should be developed in the form of active learning, allowing participants to be the subject of education and training activities in the learning process. With the experience and engagement work activities during the implementation of education and training are expected to develop skills in education and training is more impressive and stronger internalized so embedded; Education and training carried out in an interesting, impressive, and fun, as well as carefully evaluated; involvement of participants in the activity implementation of education and training provide an atmosphere of mental, emotional, social, and physical activity can make a distraction training atmosphere is more "alive" and participants will be followed by lackluster; Reflection sustainable integrated, for example in the form of FGD, need to involve various stakeholders. Reflection is needed to see the cracks weaknesses as feedback for further improvement.

Appropriate systems approach as described above, can be identified the factors that influence the success of a good education and training related to the input and the education and training process itself; mentioned factors such as: clear & meaningful task, cooperative-anticipative acktivity, cooperative learning experience based methods, cooperative and correlative, participative, exhibition result, elaboration of knowledge, critical thinking, reflection and anticipative thinking, enthusiastic, good image result and positive habits.

### III. DEVELOPMENT MODEL

There are many models of instructional systems design. Among them there are system-oriented models, such as the Dick & Carey Model, ADDIE Model, and others. There is also a model of instructional design-oriented products, because learning to produce products, such as the model Hannaffin & Peck or rapid prototype models. Also, there is a model-oriented teaching and learning activities in the classroom, such as models ASSURE, ICARE.

In general, training design steps starting from the stage of analysis, design, development, implementation and evaluation. Evaluation can be done for each step from analysis to evaluation. This training system allows participants to absorb information/ knowledge, perform skills, interact deepen knowledge and skills, and reflect on what has been learned. Fifth above it is a requirement of a successful training design

Otto and Glaser [5] proposed training strategy development model with the term Model 'Personal Training and Development'. This model consists of five activities: 1) analyzes practice problems, 2) formulate and develop training objectives, 3) selecting training materials, learning media, methods and techniques of training, 4) develops curricula and units, exercises, and topics training, and 5) assess the results of the exercise. An effective training model is considered capable when based curricula, approaches and strategies that fit the needs of the target learners and learning problems that occur in the middle of it. For the special requirements needed to build a model of an effective and efficient training. These requirements include the need/problem trainees learning.

An analysis phase typically includes several steps, such as systems analysis, which generally depict clients are asked to be involved in designing training. Formulation of objectives and tasks participants attended the training set, typically followed by reflection. After the selection of materials and media, followed by the quality of the training methods under the inspiration of trainee teachers. Once the curriculum and units, exercises, and training topics are set and implemented further training, after that need to be evaluated. The evaluation was done to determine whether the training program objectives achieved or not, and to determine if the content and training administrative satisfactory or not, to determine the benefits and costs financial program and to compare the costs and benefits of various training programs in order to choose which program is best for sustainability in the future.

Model 'Training and Development Personnel' which consists of five steps was developed through three stages: a preliminary study, the development model of teacher education and training, continued validation of the model by evaluating the efficiency and effectiveness of the model in the form of self-assessment training participants.

# IV. MEASUREMENTS AND RESULTS

Context Model 'Personnel Training and Development' are, as mentioned above, which consists of five steps activities are grouped into three stages, namely:

- 1) Preliminary studies that include analyzing problems exercise
- Planning and Development Model that includes: formulating and developing training objectives, selecting training materials, learning media, methods and techniques and develop curricula and training units, exercises, and training topics, and implement
- 3) Validation of models including further assessment to the results to develop models and learning strategies.

A preliminary study found that during this time many teachers have problems related to their professionalism. It deals with the low mastery of pedagogical competence. It is indeed the first professional competence that leads to the implementation of the duties and functions of teachers. Training for primary school teachers have not been efficient and effective and not yet developed the ability to think critically; Therefore I design an appropriate training model called 'Training and Development Personnel'

The training was held in the studio of the Working Group on Teacher Wonosobo regency May 2-10 2013 by the faculty facilitator SWCU Salatiga. The training participants were 37 people and 17 of them are alumni of SWCU Blended Learning Program.

After the first and second step is done, the model validation performed. Model validation step 'Personnel Training and Development' this is by measuring the process and outcomes of training primary school teachers, which includes measurements of the level of efficiency, and effectiveness/success of the training include increased ability to think critically. This activity is performed by conducting a self-assessment by participants of the training process that they follow and the results of the training they get. Participants' self-assessment results as shown by Table I below are evidence of the efficiency and effectiveness of training.

TABLE I: DESCRIPTION AND RESULTS OF THE MODEL

Variable	Mean	Median	Std. Deviation	
Efficiency	3,33	3	0,63	
Be Prof. teacher	3,43	3	0,51	

Given the magnitude of the mean over the median, it can be stated that 'Personnel Training and Development' model supported the efficient and effective data. Thus 'Personnel Training and Development' Model can develop elementary school teacher professionalism. Further description of the 12 independent variables thought to be determinants that influence the professional development of primary school teachers in training this model is as follows.

Based on the results of the analysis as presented in the table above, it turns out of 11 independent variables examined, most, 9 variables, such as the significant increase: 1) Clear and meaningful task, 2) cooperative-anticipative activity, 3) Cooperative learning experience based methods, 4) Cooperative and correlative, 5) Exibition result, 6) Reflection & anticipative thinking, 7) participative, 8) enthusiastic and 9) Good image result. There are only 2 variables are less well developed through this training, namely: 1) Positive habits, 2) Elaboration knowledge and 3) Critical thinking.

TABLE II: DESCRIPTION 12 INDEPENDEN VARIABLE
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	Variables	Mean	Median	Std. Deviation
1	Clear & meaningful task	3,0714	3	,61573
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2.	Cooperative-anticipative activity	3,2143	3	,42582
3.	Cooperative learning experiences based methods	3,3571	3	,63332
4.	Cooperative & correlative	3,2857	3	,72627
5.	Exibition result	3,2143	3	,42582
6.	Elaboration knowledge	2,9286	3	,73005
7.	Critical thinking	2,9286	3	,61573
8.	Reflection & anticipative thinking	3,0714	3	,47463
9.	Participative	3,2143	3	,57893
10.	Enthusiastic	3,2143	3	,57893
11.	Good image result	3,2857	3	,61125
12.	Positive habits	3,0000	3	,55470

Furthermore, to find the determining factors / determinants of professional quality teachers as agents of change carried Step Wise Regression Testing models whose results are presented in Table III as follows.

TABLE III: MODEL SUMMARY

Model	R	R Square	Adjusted <i>R</i> Square	Std. Error of the Estimate
1	. 703ª	.495	.453	.37991
2	. 823 <sup>b</sup>	.677	.619	.31707

a. Predictors: (Constant), Elaboration\_knowledge

b. Predictors: (Constant), Elaboration\_knowledge, Cooperative correlative

Based on the results of the regression analysis as above, of the 12 independent variables, was obtained only 2 influential models of its determinants of independent variables on the professional quality of teachers as change agents error of standards respectively. Knowledge elaboration variable influence the magnitude of (Model 1) the level of professional quality of teachers as agents of change was 45.30%. Knowledge elaboration and Cooperative and correlative level of influence (Model 2) the professional quality of teachers as agents of change was 61.90%. In order to know how high the level of significance of each model it can be examined in Table IV below.

TABLE IV: SIGNIFICANCE TEST RESULTS ANOVAC

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.697	1	1.697	11.755	.005 <sup>a</sup>
	Residual	1.732	12	.144		
	Total	3.429	13			
2	Regression	2.323	2	1.161	11.552	.002 <sup>b</sup>
	Residual	1.106	11	.101		
	Total	3.429	13			

a. Predictors: (Constant), Elaboration\_knowledge

 $b.\ Predictors:\ (Constant),\ Elaboration\_knowledge,\ Cooperative\_correlative$ 

c. Dependent Variable: Be\_Prof\_teacher

Based on the ANOVA results as presented in Table IV, from the 12 independent variables, only gained 2 models with only 2 variables to be a determinant variable professional development of teachers as agents of change, while the other variables excluded from the model, because it is not significant. Model 1 is obtained F = 11.755 with a significance level = 0.005; This means a determinant variable Knowledge Elaboration of the professional development of teachers as agents of change through 'Training and Development Personnel' model of the influence of 45.30%. Model 2 obtained at F = 11.552 with a significance level = 0.002; This means variable Knowledge Elaboration and Cooperative and correlative becomes a significant determinant of the professional development of teachers as agents of change through 'Training and Development Personnel' model of the influence of 45.30%.

#### V. DISCUSSION

'Training and Development Personnel' model which originally composed 5 stages, and there are three modified phases: 1) preliminary studies (analyzing training problems), 2) planning and development model (formulating and developing training objectives, selecting training materials, learning media, methods or techniques, the developed curricula and training units, exercises, and training topics, as well as execute) 3) model validation (assessing the results of the exercise). After the first and second step, the third step is done by measuring the model validation process and results of primary teacher training, which includes measurements of the level of efficiency and effectiveness / success of the training. It turns out that the model of training 'Personnel Training and Development' supported the efficient and effective data.

An alumnus of SWCU Blended Learning Program with a strong personal vision will always ask, and ask again, to confirm their profession as a teacher. A teacher must love changes and aware of duties and functions professionally. Therefore when training is undertaken it must be relevant to the problems in the field. It will surely support the development of critical and creative thinking skills. Moreover, when training tasks are followed by the natural quality, 'Personal Training and Development' model can inspire teachers professionally as agents of change.

A model of training is considered effective when it is able fit the strategies and approaches to the practical needs of teachers. Two variables that proved critical success training contributed almost 62% to be a priority in the training and Cooperative Knowledge Elaboration & correlative. This means that the 'Personnel Training and Development' Model will be successful if 1) the curriculum or the quality of materials and method of training allows participants to build new and meaningful knowledge (elaboration), and 2) applying cooperative learning where training materials relating to ES issues which teachers duty. These findings strengthen the theory of positive psychology and constructivism that seems to be effective in training 'Personal Training and Development' Model for teachers, especially alumni of SWCU Blended Learning Program.

The training model consists of five steps which are then modified into 3 phases allows the teacher trainee cannot just absorb the knowledge, conduct/skilled, interact deepen their knowledge and skills, and reflect on what has been learned, but also to build new knowledge and meaningful to the lives of teachers; in other words it is a requirement 5 successful training design have been met. So it is feasible if the training was successfully developed to develop the professionalism of teachers as agents of change that is supported by two independent variables are significant and Cooperative Knowledge Elaboration & correlative.

### VI. CONCLUSION

Training model 'training and development personnel' for primary teachers alumni of SWCU Blended Learning Program was efficient and effective; based on the results of the analysis, it turns out of 12 independent variables examined, most (9 variables), experienced significant improvement, namely: 1) clear and meaningful task, 2) cooperative-anticipative activity, 3) cooperative learning experience based methods, 4) cooperative and correlative, 5) exhibition result, 6) reflection & anticipative thinking, 7) participation of teachers, 8) enthusiastic and 9) good image result. There are only 3 variables are less well developed through this training, namely: 1) Positive habits, 2) knowledge Elaboration and 3) Critical thinking.

There are 2 models of the determinants / influential independent variables on the professional development of teachers as agents of change: Knowledge elaboration varies (Model 1) influence 45.30% to professional quality of teachers as agents of change; Knowledge elaboration and Cooperative and correlative variables (model 2) influence 61.90% of the professional quality of teachers as agents of change.

Therefore, this model can be replicated in other groups of working teachers to improve the quality of teacher professionalism, including improving the quality of teachers' duties and function is the advancement of education, especially for the improvement of elementary school.

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