

# The Development of *Nyantrik* Learning Model in the Field Experience Practice Program for the Bachelor (S-1) Students of Teacher Training Institutions

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## Abstract

**Objective:** The objectives of this research are to develop *Nyantrik* learning model in the Field Experience Practice Program for the bachelor (S-1) students of Teacher Training Institutions, and to investigate the effectiveness of the *Nyantrik* learning model. **Method:** This research was conducted at Teacher Training Institutions in the regions of Madiun Residency, East Java, Indonesia. It used the research & development method with the following phases: preliminary studies (library research, field survey, product drafting), development (limited experiment and field experiment), and testing (pre-test, treatment, and post-test). **Result:** The results of the research are as follows: 1) *Nyantrik* learning model is a learning model which is used in the Field Experience Practice Program for the bachelor (S-1) students of the Teacher Training Institutions with the process of teacher competency transformation through imitation, identification, and internalization of the competencies owned by the mentor teachers. The teacher competency transformation is done by applying the teaching proposed by Ki Hajar Dewantara that is *tut wuri handayani* (supporting from the back), *ing madya mangun karsa* (building spirit in the middle), and *ing ngarsa sung tulada* (setting an example in the front) in formal and informal *Nyantrik* situations. 2) The results of the learning model effectiveness test are as follows: a) The teacher competency transformation through imitation, identification, and internalization can take place well; b) the application of the teaching of *Ing ngarsa sung tuladha*, *ing madya mangun karsa*, and *tut wuri handayani* can form the teacher competencies maximally; and c) the blend between the formal *Nyantrik* and the informal *Nyantrik* can create a harmonious mentoring from the mentor teachers to the students doing the Field Experience Practice Program including the implementation of periodical workshops, which can form the teacher competencies maximally, namely: their pedagogical, professional, personal, and social competencies. **Conclusion:** Based on the results of the research, a conclusion is drawn that the *Nyantrik* learning model is very effective to be applied in the Field Experience Practice Program as to form the teacher competencies of the bachelor (S-1) students of Teacher Training Institutions.

**Keywords:** The development of learning model, *Nyantrik*, Field Experience Practice Program, and teacher competency.

## 1. Introduction

**Background:** The graduates of higher education institutions particularly the Teacher Training Institutions (The Faculty of Teacher Training and Education, the Institute of Teacher Training and Education, and the College of Teacher Training and Education) must bear pedagogical, professional, and personal, and social competencies. Since the first semester until the sixth semester, the students are given and supplied with theoretical subject matters related to the formation of the four aforementioned teacher competencies. This must be done not just through the delivery of theoretical subject matters but also through that of practical subject matters by executing Field Experience Practice Program. Rector of State University of Jakarta, Bedjo Sujanto, claims that the philosophy of Field Experience Practice Program means preparing professional and good teachers from now on. To be such professional and good teachers is not that easy, and many things must be done as they are our very valuable future investments. They are only prepared by Teacher Training Institutions, and shall possess a high self confidence to be professional ones. (<http://unj.ac.id/web.php?module=detailberita&id=45>). Similarly, Head of the Technical Implementing Unit of Field Experience Practice Program of Sebelas Maret University says that Field Experience Practice Program is a media for the students to apply their profession basics. In the Faculty of Teacher Training and Education, Field Experience Practice Program is applied in the form of teaching practices and other educational activities at schools (<http://ppl.fkip.uns.ac.id/ppl/>).

Based on the preliminary studies, there are various problems identified at schools, particularly those related to the mastery of teacher competencies for novice teachers. The problems which cause the low mastery of the teacher competencies by the novice teachers start from the process of the formation of the teacher competencies at the Teacher Training Institutions. The principal problems are very closely related to the formation of the four teacher competencies, particularly the ones related to the psychomotor aspects or learning

skills, that is, the less effectiveness of learning models in the Field Experience Practice Program. To deal with the prevailing gaps in the Field Experience Practice Program can be done by developing a learning model called *Nyantrik* learning model.

**Problem Statement: Based on the above discussion, the problem statements of the research are formulated as follows: How is the implementation of the Field Experience Practice currently? How is the procedure for the development of the *Nyantrik* learning model in the Field Experience Practice Program? How is the effectiveness of the development of the *Nyantrik* learning model in the Field Experience Practice Program?**

**Theoretical studies: For a profession including the teacher profession, competencies are of its demands.** Teacher is one of the factors and a determining component of the successfulness of the learning process. Therefore, a teacher must own various competencies related to the duties that or she bears as to be able to execute their duties professionally.

*A competency is more than just knowledge and skills. It involves the ability to meet complex demands, by drawing on and mobilizing psychosocial resources (including skills and attitudes) in a particular context. For example, the ability to communicate effectively is a competency that may draw on an individual's knowledge of language, practical IT skills and attitudes towards those with whom he or she is communicating.* (www.oecd.org/edu/statistics/desecowww.deseco.admin.ch) 2003 D.S. Rychen and L.H. Salganik (eds.)

Based on the above claim, competency is defined not only to cover knowledge and skills but also to involve the complex psychosocial resources in accordance to the competency contexts. Therefore, competency includes knowledge, skills, and attitudes that shall be owned by one according to his or her duties. Teacher is a profession that demands a competency possession. Profession is a job that requires or demands an expertise, a scientific technique, and a high dedication in its execution. Accordingly, a teacher must have four competencies as mandated by Regulation of the Minister of National Education, Number: 16 of 2007. The four competencies are pedagogical, professional, personal, and social competencies.

The essence of the Field Experience Practice Program is an extracurricular activity done by students, which includes teaching practices and guided and integrated extracurricular educational duties as to fulfill the requirements for the formation of education profession. (<http://pbingskip.unlam.wordpress.com/prosedur-operasional-standar/ba-vi-praktek-pengalamanlapangan>). The Field Experience Practice Program includes all of curricular activities that must be done by the students as training media to apply the theories that they obtained previously so that they have field experiences and skills in administering a guided and integrated education and learning as a media for the formation of teacher competencies.

In Javanese dictionary, "*Cantrik* is literally defined as *abdining pandhita ngiras dadi murid* (aide to a minister who at the same time studies to be a disciple); *Nyantrik* : *ngabdi marang pandhita* (dedicate one's self to a minister); literally apprenticeship" (Compiler Team of Balai Bahasa Yogyakarta, 2002: 93-94). Another caim says that "*Cantrik means student or santri in padepokan.*" (Purwadi, 2004: 66). *Nyantrik* means learning from, becoming students. *Cantrik* comes from Javanese language. Literally the meaning is a student. "*Untuk tingkatan "Taman-Guru" atau pengadjar-pengadjar kita jang keluaran sekolah lain, lalu masuk kedalam kalangan kita dengan mendapat pimpinan dari salah seorang pemimpin, jang telah mendapat hak mendidik tjantrik; lamanja petjantrikan itu tergantung pada kepandaian, pengetahuan dan adat-istiadatnya jang mentjantrik*". (Literally. for the level of our teachers who graduated from other schools and who entered among us after having guidance from one of our senior teachers bearing the rights to educate the students, the length of the learning depends on his or her cleverness, knowledge, and custom) (*Ki Hajar Dewantara, 1962: 115*). At the school of Taman Siswa *Cantrik* was male teacher graduated from other schools (not from the circle of the school of Taman Siswa) who would teach at the school, and the female one was called "*Mentrik*." *Cantrik* and *Mentrik* had to get guidance from senior teachers or mentor teachers so that he or she could become a teacher at the school of Taman Siswa. Based on such a definition, the notion is adopted into *Nyantrik* learning model. In this learning model, the students doing the Field Experience Practice Program become *Cantrik/Mentrik* and the teachers who guide the students in the program are called *Guru Pamong* (mentor teachers).

The learning process in the *Nyantrik* learning model concentrates on the high awareness, obedience, motivation, and interest of the students to form their teacher competencies. The high awareness, obedience, and interest of the students to learn from or to absorb various competencies from the mentor teachers are the principle requirement for them to follow the Field Experience Practice Program with the *Nyantrik* learning model. In this situation, the *Cantrik* (students) are very easy to form their own competencies maximally as the ones owned by their mentor teachers.

The competency transformation process in the *Nyantrik* learning model includes the knowledge, skill, value, and attitude transformation processes. According to Salim & Salim (2001: 218), in such material and competency transformation processes, the psychological involvement experienced by the students at least includes the following four measures, namely: 1) imitation, 2) identification, 3) internalization, and 4) externalization or actualization. a) Imitation is a process to imitate what others do. In this situation, one adopts or

duplicates one kind of aspects or one kind of simple attitudes of his or her idol. b) Identification means total imitation, that is, the tendency to imitate various kinds of natures and attitudes of other people. c) Internalization is an effort to unite all of the values to become private parts of his or her being to the extent. d) Externalization or actualization of what is imitated, identified, and internalized in one's self will be materialized in the forms of attitudes.

The competency transformation process in the *Nyantrik* learning model also prevails through the application of the teachings of Ki Hajar Dewantara. In the educational process, a mentor teacher as a leader must have the following attitudes: *Ing ngarsa sung tulada* (setting an example in the front), *Ing madya mangun karsa*, (building spirit in the middle), and *Tut wuri handayani* (supporting from the back). A mentor teacher as an educator is essentially obliged to be an exemplary teacher by giving positive models in his/her daily life. He or she must be consequent and consistent in term of his/or her behaviors or the oneness of words and deeds. (*Ngerti/understand-Ngrasa/feel-Nglakoni/perform*). The role model performed by the mentor teacher is meaningful for it will affect the formation of the students' characters (Ki Hariyadi, 1985: 16). In addition, a mentor teacher must also be able to encourage the students to do their tasks so that they execute them vigorously. (*Ing madya mangun karsa*). Furthermore, as a mentor teacher he or she must put the learners or students as the subjects and the objects of the learning, or he or she must behave as contained by the notion of *tut wuri handayani*.

Both the traditional (informal) and modern (formal) methods can be implemented simultaneously in the *Nyantrik* learning model. The formation of teacher competencies can be done through the application of two educational pathways, namely: Informal Education and Formal Education. Informal *Nyantrik* means the students learn from the professional mentor teachers during the school hours or out of the school hours. Formal *Nyantrik* means the learning process in the *Nyantrik* system, which is done by the students with the guidance of the related subject matter mentor teachers, and which takes place at the schools where the Field Experience Practice Program is carried out. A periodical workshop once in two weeks is conducted to help the students to deal with the problems during the implementation of the Field Experience Practice Program.

The *Nyantrik* learning model which is applied in the implementation of the Field Experience Practice Program Model has the following syntaxes:

- a. Intensive transformation of knowledge, skills, and attitudes through imitation, identification, and internalization.
- b. The students in executing the transformation process through imitation, identification, and internalization is based on the results of observation on the role-modeling done by their mentor teachers.
- c. The transformation process through imitation, identification, and internalization of the competencies of their mentor teachers is done in accordance with the teachings of Ki Hajar Dewantara, namely: *Ing ngarsa sung tuladha*, *Ing madya mangun karsa*, and *Tut wuri handayani*.
- d. The intensive transformation process of knowledge, skills, and attitudes is done through informal *Nyantrik* and formal *Nyantrik*.
- e. The periodical workshop is conducted to deal with the problems encountered by the students.

## 2. Method

This research used the Research and Development (R&D) method. Seels dan Richey in Jonassen (2006: 213) claim that "Development research, as opposed to simple instructional development, has been defined as "the systematic study of designing, and evaluating instructional programs, processes, and products that must meet the criteria of internal consistency and effectiveness." Furthermore, Borg (2007: 624) says that the research and development is part of process used to develop and validate educational products. Similarly, Nana Syaodih Sukmadinata (2007:164) suggests that the research and development is a process or a set of measures to develop or to improve a prevailing product, which is accountable. The product can be hardware such as book, module, and learning aids in class or laboratory or software such as computer program. Based on the above explanation, it can be said that the Research and Development is a systematic study on the design, development, and evaluation of program, process, and product either the software or the hardware, which meets the internal consistency criteria and effectiveness.

This research used the modified phases claimed by Nana Syaodih Sukmadinata, namely: preliminary studies preliminary studies (library research, field survey, product drafting), development (limited experiment and field experiment), and testing (pre-test, treatment, and post-test). The data of the research were gathered through observation, questionnaire, in-depth interview, and content analysis of documents The qualitative data of the research were then continuously analyzed by using the interactive technique of analysis as proposed by Miles dan Huberman (in Sugiyono, 2007: 246) with the following phases: data reduction, data display, and conclusion drawing or verification

### 3. The Results of The Research

A preliminary research was done to investigate the strengths and weaknesses of the apprenticeship (*Nyantrik*) learning model employed in the Field Experience Practice Program prior to the development of a new learning model. All this time, the Field Experience Practice Program used the apprenticeship learning model with its various strengths and weaknesses.

*3.1. The results of the preliminary research were as follows:*

a. The Result of In-depth Interview with School Principals

Many new teachers were found to have minimal pedagogical, professional, personal, and social competencies as indicated by the result of teachers' performance evaluation whose average score was 70. This score was adequately appropriate with the criteria in the teachers' Performance Evaluation.

b. The Result of In-depth Interview with Head of the Technical Implementing Unit of Field Experience Practice Program.

The learning model employed in the Field Experience Practice Program was the apprenticeship learning model used in Junior Secondary School, Senior Secondary School, and Vocational High School. With its limitations all this time, the formation of the teacher competencies of the students doing the program was still not maximal. Its strengths were as follows: 1) its administration was practical and easy. 2) The time for the implementation of the Field Experience Practice Program was short that it was affordable. 3) The placement of the students doing the program at the related schools where the teaching practices were conducted was determined by the Technical Implementing Unit of Field Experience Practice Program. Its weaknesses were as follows: 1) The formation of the teacher competencies of the students doing the Technical Implementing Unit of Field Experience Practice Program was not maximal because of the lack of teaching practice frequencies. 2) The personal relations between the students and the mentor teachers were less intensive. 3) The relations between the students and the field advisor lecturers were also less intensive.

c. The Result of In-depth Interview with Students

The result of in-depth interview with the students who had done the Technical Implementing Unit of Field Experience Practice Program last year, but had not graduated, were as follows:

- 1). The mentor teachers and the field advisor lecturers were less intensive in the administration of guidance to the students doing the Field Experience Practice Program.
- 2). The relation between the students doing the Field Experience Practice Program and the mentor teachers and the field advisor lecturers was not harmonious.
- 3). The formation of the teacher competencies was less maximal so that the students felt that they were less armed to be teachers in the future. The competency mastery was only 70% on average.
- 4). The apprenticeship learning model all this time was less effective and efficient in the formation of the teacher competencies.

Based on the aforementioned results of the interviews with the related parties, conclusions are drawn as follows:

- a) Most of the new or novice teachers still have minimal teacher competencies either in pedagogical, professional, personal, or in social competencies.
- b) The competencies owned by the students after having done the Field Experience Practice Program with the apprenticeship learning model is not maximal.
- c) The apprenticeship learning model in the Field Experience Practice Program has several weaknesses, and therefore it needs modifications and reviews so as to maximize the formation of the teacher competencies more for the students of Teacher Training Institutions.
- d) A new learning model needs to be developed in the administration of the Field Experience Practice Program, which can form the teacher competencies of the students so as to maximize their competencies and to prepare them for employment at schools in the future.

Based on the results of the preliminary studies, some weaknesses of the apprenticeship learning model are found in the administration of the Field Experience Practice Program. Therefore, a new learning model needs to be developed in the administration of the Field Experience Practice Program. It is expected to form the teacher competencies more maximally. The new model developed in this model is called *Nyantrik* learning model.

*3.2. The phase of product development is the second phase of the research and development processes.* In this phase, the following were conducted:

a. Limited Experiment

The limited experiment of the *Nyantrik* learning model was assessed by expert judgment done by two experts who were competent in the field particularly the one related to the Field Experience Practice Program. The result of the assessment with the expert judgment showed that the *Nyantrik* learning model developed needed to be revised as to obtain a better learning model. The components which were required to be

supplemented were as follows: 1) periodical workshops and 2) the addition of frequencies of the role modeling by mentor.

#### b. Data of Limited Experiment

The revised *Nyantrik* learning model was then experimented limitedly to three students doing the Field Experience Practice Program. The results of the experiment were as follows:

- 1) The competency transformation process through imitation run well. The students enthusiastically followed the role-modeling by the mentor teachers and then imitated the learning step by step.
- 2) The competency transformation process through identification was done by the students following the role modeling by the mentor teachers. Based on the result of observation, the absorption of the teacher competencies was done well by the students. They were able to thoroughly apply what was exemplified by the mentor teachers.
- 3) The evaluation of the competency transformation process through internalization included the arrangement of lesson plans and the implementation of the learning. A gradual teacher competency improvement persisted as a positive impact of the competency transformation process through internalization in the *Nyantrik* learning model.
- 4) During the field experiment, workshop was conducted for three times. The results of the workshop for three periods showed the following:
  - a) The workshop conducted once every two weeks was very useful for the students in conveying the difficulties and constraints encountered during the Field Experience Practice Program.
  - b) The mentor teachers could give evaluations and corrections to the students doing the teaching practice and at the same time offer solutions to them so that they could be used as the bases for improvement of the next teaching practices.
  - c) The periodical workshop was very good and was very much required in the implementation of the *Nyantrik* learning model as it could grow a harmonious and flexible communication between the students and the mentor teachers.

Based on the results of the aforementioned limited experiment, it can be said that the *Nyantrik* learning model was good and appropriate to be employed in the implementation of the Field Experience Practice Program for the bachelor (S-1) students of the Faculty of Teacher Training and Education, the Institute of Teacher Training and Education, and the College of Teacher Training and Education. The next phase was the comprehensive testing of the effectiveness of the *Nyantrik* learning model.

#### c. Data of the Result of Learning Model Effectiveness Test

The testing of the effectiveness of the *Nyantrik* learning model was done for three months at Vocational High School PGRI 6 of Ngawi, East Java, Indonesia and State Senior Secondary School 1 of Magetan, East Java, Indonesia. The samples consisted of 10 students of the College of Teacher Training and Education PGRI of Ngawi and 9 students of the College of Teacher Training and Education Dr. Nugroho of Magetan. The students were called *Cantrik*. Their task was to implement the Field Experience Practice Program by applying the *Nyantrik* learning model guided by the mentor teachers.

- 1) The Result of Questionnaire at the Beginning of the Field Experience Practice Program.  
The recapitulation of questionnaire at the beginning of the Field Experience Practice Program showed the following:
  - a) Most of the respondents (55.53%) chose answer “doubt”. This indicates that at the beginning of the Field Experience Practice Program most of the students were still doubt and did not understand the application of the *Nyantrik* learning model in the Field Experience Practice Program.
  - b) 27.63% of the respondents chose answer “disagree”. This indicates that at the beginning of the Field Experience Practice Program, the students had never applied the *Nyantrik* learning model so that they did not know the impact of the application of such a learning model.
- 2) The Result of Observation on the Teacher competencies through Imitation and Identification  
The result of the recapitulation table shows that the absorption of the teacher competencies through imitation (81.58%) and identification (80.63%) could be done by the students in “Good” category. This indicates that the teacher competency transformation process through imitation and identification in the *Nyantrik* learning model could form the students’ teacher competencies very well.
- 3) The Result of Evaluation on the Lesson Plans and the Learning Implementation  
In this research, the mentor teachers conducted the evaluation on the students’ ability in arranging lesson plans and in the learning implementation periodically for four times, completed with test once, but the field advisor lecturers only did evaluation once through the test. The result of the evaluation is presented in the table below:

Table 1: The Recapitulation of the Result of Evaluation on the Lesson Plans and the Learning Practice Conducted by the Mentor Teachers and the Field Advisor Lecturers

| Student Number | I            | II            | III           | IV            | V             | VI            |
|----------------|--------------|---------------|---------------|---------------|---------------|---------------|
| 1              | 71.4         | 74.4          | 77.4          | 80            | 84.8          | 85.4          |
| 2              | 76           | 78            | 82            | 87            | 93            | 95.2          |
| 3              | 74.4         | 78.6          | 85            | 88.4          | 94            | 87.6          |
| 4              | 76.2         | 78.4          | 83.4          | 87.6          | 92.2          | 92.2          |
| 5              | 65           | 73            | 77.6          | 84            | 88            | 88,2          |
| 6              | 66           | 72            | 77            | 80.4          | 86            | 82            |
| 7              | 74.4         | 77.6          | 86.2          | 88            | 90            | 92.6          |
| 8              | 67.6         | 72            | 75            | 80            | 84            | 80            |
| 9              | 75           | 77            | 84            | 87            | 92.4          | 90.6          |
| 10             | 61           | 65            | 74            | 80.8          | 90.6          | 87.4          |
| 11             | 77.8         | 75.4          | 79.6          | 84.2          | 93.8          | 86.4          |
| 12             | 73.8         | 77.4          | 79.4          | 83.2          | 92.8          | 89            |
| 13             | 74.4         | 77.2          | 80.6          | 85.8          | 92.8          | 86.8          |
| 14             | 73           | 77.6          | 83.8          | 88.6          | 92.4          | 87            |
| 15             | 67.8         | 74.6          | 78.6          | 82.2          | 87.6          | 88.2          |
| 16             | 65.2         | 71.8          | 76.6          | 82.6          | 89.2          | 87.4          |
| 17             | 68           | 73            | 76.6          | 82.6          | 90            | 83.4          |
| 18             | 75           | 76.8          | 73            | 77.6          | 84.8          | 81.6          |
| 19             | 66           | 75            | 76.8          | 80.6          | 86.4          | 82            |
| <b>Total</b>   | <b>1348</b>  | <b>1424.8</b> | <b>1506.6</b> | <b>1590.6</b> | <b>1704.8</b> | <b>1564.8</b> |
| <b>Average</b> | <b>70.95</b> | <b>74.99</b>  | <b>79.29</b>  | <b>83.72</b>  | <b>89.72</b>  | <b>86.93</b>  |

Remarks:

- I : Score given by the mentor teachers in the first period
- II : Score given by the mentor teachers in the second period
- III : Score given by the mentor teachers in the third period
- IV : Score given by the mentor teachers in the fourth period
- V : Score of test given by the mentor teachers during the Field Experience Practice Program
- VI : Score of test given by the field advisor lecturers during the Field Experience Practice Program

Table 1 shows that the application of the *Nyantrik* learning model could form the teacher competencies well gradually and continuously so that the result was maximal. This indicates that the level of competency mastery achieved “very satisfactory” category. The improvement of the competency mastery in the arrangement of lesson plans and in the learning implementation was due to the intensive guidance by the mentor teachers and the field advisor lecturers both at schools and outside of the schools.

The average score (combined score) of each student, given by the mentor teachers and the field advisor lecturers became his or her final score of the Field Experience Practice Program. The above recapitulation shows that the average final score of the Field Experience Practice Program was 88.36. It was a “very good” achievement of all the students implementing the *Nyantrik* learning model in their Field Experience Practice Program. This signifies that the application of the *Nyantrik* learning model was very effective in the formation of the teacher competencies of the bachelor (S-1) students of the Faculty of Teacher Training and Education, the Institute of Teacher Training and Education, and the College of Teacher Training and Education.

#### 4) The Result of Periodical Workshop Conducted Once Every Two Weeks

The following were the results of the periodical workshop from the first to the fifth workshop:

- a) The periodical workshop conducted once every two weeks was very useful for the students doing the Field Experience Practice Program to convey the difficulties and constraints that they encountered during the program.
- b) The mentor teachers could do evaluations and corrections toward each students who had done the teaching practice and at the same time give solutions to them upon their difficulties and constraints so that they could use them as bases for improvement in the next teaching practices.
- c) The workshop was very good and was very much required for the implementation of the *Nyantrik* learning model in an attempt to form the teacher competencies maximally. The relation between the students and the mentor teachers could run harmoniously and flexibly so that the guidance process could run well.

### 5) The Result of Observation on the Teacher competencies

The evaluation on the formation of the teacher competencies by the mentor teacher was periodically done for three times, namely: twice when the students still executed their teaching practice in the Field Experience Practice Program and once at the end of the program. Similarly, the evaluation was also conducted by field advisor lecturers at the end of the Field Experience Practice Program.

The recapitulation of the result of the evaluation by the mentor teachers and the field advisor lecturers is presented in the table below:

Table 2: The Recapitulation of the Result of Evaluation on the Teacher competencies by the Mentor Teachers and the Field Advisor Lecturers

| Student Number | I              | II             | III           | IV            |
|----------------|----------------|----------------|---------------|---------------|
| 1              | 61.40          | 71.83          | 81.13         | 92.67         |
| 2              | 57.75          | 70.42          | 83.09         | 86.47         |
| 3              | 61.40          | 77.18          | 82.25         | 86.19         |
| 4              | 62.82          | 75.77          | 82.53         | 88.45         |
| 5              | 76.06          | 81.41          | 86.19         | 88.73         |
| 6              | 61.97          | 73.52          | 81.41         | 81.12         |
| 7              | 58.30          | 67.61          | 76.62         | 81.69         |
| 8              | 52.67          | 65.63          | 76.06         | 79.71         |
| 9              | 59.44          | 69.86          | 79.72         | 81.97         |
| 10             | 63.09          | 73.52          | 82.25         | 80.84         |
| 11             | 59.44          | 69.86          | 78.87         | 81.97         |
| 12             | 76.34          | 78.59          | 81.97         | 82.81         |
| 13             | 56.90          | 66.48          | 77.75         | 81.12         |
| 14             | 58.31          | 65.92          | 77.75         | 81.69         |
| 15             | 59.15          | 75.77          | 81.41         | 81.41         |
| 16             | 62.82          | 75.49          | 82.53         | 80.84         |
| 17             | 75.49          | 80.56          | 83.66         | 83.09         |
| 18             | 59.72          | 76.06          | 81.41         | 80,00         |
| 19             | 60.28          | 73.80          | 80.28         | 80.00         |
| <b>Total</b>   | <b>1184.23</b> | <b>1389,29</b> | <b>1536.9</b> | <b>1580.8</b> |
| <b>Average</b> | <b>62,33</b>   | <b>73,12</b>   | <b>80,88</b>  | <b>83,2</b>   |

Remarks:

- I : Score given by the mentor teachers in the first period
- II : Score given by the mentor teachers in the second period
- III : Score given by the mentor teachers in the final period
- IV : Score given by the field advisor lecturers in the final period

The table above shows that based on the evaluation on the teacher competencies by the mentor teachers for twice during the teaching practice once at the end of the Field Experience Practice Program, there was an improvement in the formation of the teacher competencies. In addition, the evaluation executed by the mentor teachers and the field advisor lecturers shows that there was a very significant improvement in the formation of the teacher competencies from the first to the final period of the Field Experience Practice Program. The application of the *Nyantrik* learning model could form the four teacher competencies well gradually and continuously so that the result was maximal. This indicates that the *Nyantrik* learning model was very effective to be used to form the teacher competencies of the bachelor (S-1) students of the Faculty of Teacher Training and Education, the Institute of Teacher Training and Education, and the College of Teacher Training and Education.

### 6) The Result of Questionnaire of the *Nyantrik* Learning Model at the End of the Field Experience Practice Program

At the end of the Field Experience Practice Program, all of the students involved in this research were given questionnaire of the *Nyantrik* learning model with 20 items of questions. The objective was to investigate their responses toward the *Nyantrik* learning model applied during the Field Experience Practice Program. Based on the recapitulation of the result of questionnaire at the end of the Field Experience Practice Program, 99.21% of the students chose the options “strongly agree” and “agree” to the implementation of the *Nyantrik* learning model in the Field Experience Practice Program. This indicates that the effectiveness level of the application of the *Nyantrik* learning model was very high, and its acceptability by the students was also very high.

#### 4. Discussion

The *Nyantrik* learning model in the Field Experience Practice Program is a unique model but modern by integrating the informal *Nyantrik* learning model and the formal *Nyantrik* learning model.

a. The teacher competencies that must be owned by bachelor (S-1) graduates in education of Teacher Training Institutions.

The bachelor (S-1) graduates in education of Teacher Training Institutions must bear four teacher competencies as mandated in Regulation of the Minister of National Education of the Republic of Indonesia Number: 16 of 2007 regarding Academic Qualifications and Teacher Competencies. The teacher competencies that must be owned by the graduates are pedagogical, professional, personal, and social competencies.

b. The Application of the Apprenticeship Learning Model in the Field Experience Practice Program.

The apprenticeship learning model which has been applied in the Field Experience Practice Program all this time has several weaknesses as follows: 1) the formation of the teacher competencies of the students doing the Field Experience Practice Program has not been maximal due to the lack of teaching practice frequencies at schools. This is in accordance with the result of the research conducted by Liisa Postareff (2007: 565) that the teaching practice frequency affects the formation of the teacher competencies. 2) The personal relations between the students doing the Field Experience Practice Program and their mentor teachers are less intensive so that the guidance process is less maximal. 3) There have not been any discussion forums where the students doing the Field Experience Practice Program can discuss the problems that they encounter, and as results many problems and constraints are not solved. 4) The guidance given by the mentor teachers is only extended at the teaching practice sites during the working hours. As a result, the impact is not maximal.

To deal with the weaknesses, a more suitable new learning model needs to be developed as to form the teacher competencies more maximally.

c. The Development of the *Nyantrik* Learning Model in the Field Experience Practice Program.

The procedure for the development of the *Nyantrik* learning model in the Field Experience Practice Program can be done through the following phases: a. Preliminary studies: library research, field survey, and product drafting. b. development: limited experiment and field experiment), and c. testing: pre-test, treatment, and post-test.

d. The effectiveness of the *Nyantrik* learning model in the Field Experience Practice Program

The result of the *Nyantrik* learning model effectiveness test shows that the result of the pre- and post-tests has a very significant difference because the *Nyantrik* learning model is applied in more frequencies of teaching practices. This indicates that such a treatment has a positive effect on the formation of the teacher competencies, which is in accordance to the learning theory of Behaviorism (S-R Bond) that the more stimulus is given, the better/steadier the responses are formed.

The process of the formation of the teacher competencies through imitation, identification, and internalization shows a very good result, as claimed by Salim & Salim (2001: 218) that there is a tendency for someone to imitate what someone else acts according to the demand of competencies that he or she owns. The formation of the teacher competencies takes place gradually and continuously in tune with the process of intensive guidance by professional mentor teachers. This can happen due to the obedience of the *Cantrik* (students doing the Field Experience Practice program) to *Begawan/Empu* (mentor teachers).

The improvement in the teacher competency mastery is also related to the workshop conducted periodically one every two weeks. All of the problems encountered by the students during the arrangement of lesson plans and the learning implementation are conveyed during the workshop, and the solutions for the problems are also looked for so that the same problems will not occur repeatedly in the next periods of teaching practices. The results of the workshops are the bases for designing the next lesson plans and implementing the next learning processes. Thereby, the formation and improvement of the competency can periodically take place for each teaching practice. The results of this research are in line with the one by Robert Rueda and Lilia D. Monzo (2002) that the collaboration between the teachers and the prospective teachers in the discussion or brainstorming can improve the mastery of teacher competencies.

Based on the results of observation on the mastery of the teacher competencies it can be found that the application of the *Nyantrik* learning model can form the four teacher competencies well gradually and continuously so that the results are maximal as indicated by the improvement of the average score for each period of the teaching practices. This signifies that the application of the teachings claimed by Ki Hajar Dewantara, namely: *Ing ngarsa sung tuladha, Ing madya mangun karsa, Tut wuri handayani* in the process of *Nyantrik* learning model is very effective to be used to form the teacher competencies of the students. In line with the claim of Ki Hajar Dewantara (1962), mentor teachers must become the role model, encouragement, and support to materialize the expected competencies.

The intensive guidance process either in informal or in formal situations can form the teacher competencies maximally. The intensive guidance can grow a good and harmonious relation between the students

doing the teaching practices and their mentor teachers. The informal situation with a high flexibility can build an intimate personal relation. Thus, it will favorably generate positive impacts to the formation of the teacher competencies during the implementation of the Field Experience Practice Program.

## 5. Conclusion

Based on the results and discussion of the research, conclusions are drawn as follows:

- a. As prospective teachers, the bachelor (S-1) graduates in education of Teacher Training Institutions must have four teacher competencies as mandated by Regulation of the Minister of National Education, Number: 16 of 2007 regarding Academic Qualifications and Teacher Competencies. The four competencies are pedagogical, professional, personal competency, and social competencies.
- b. The results of the preliminary studies show that the students doing the Field Experience Practice Program with the apprenticeship learning model have not owned the teacher competencies maximally. There have been some weaknesses in the apprenticeship learning model all this time, and therefore it is necessary to develop a new learning model to materialize the formation of the teacher competencies maximally so that the bachelor (S-1) graduates in education of Teacher Training Institutions are well-prepared to be professional teachers in the future.
- c. To deal with the weaknesses in the apprenticeship learning model, a new learning model is developed, which is called *Nyantrik* learning model. It is a learning model which is employed in the Field Experience Practice Program for the bachelor (S-1) students of the Faculty of Teacher Training and Education, the Institute of Teacher Training and Education, and the College of Teacher Training and Education through imitation, identification, and internalization toward the competencies owned by the mentor teachers. The students play role as *Cantrik* and the mentor teachers play role as *Begawan* or *Empu* (educator). The teacher competency transformation is implemented by applying the teachings of Ki Hajar Dewantara, namely: *Ing ngarsa sung tuladha, ing madya mangun karsa, and tut wuri handayani* both in formal *Nyantrik* (learning) and in informal *Nyantrik*.
- d. The *Nyantrik* learning model in the Field Experience Practice Program, which has unique specifications, is very appropriate to be employed for the maximal formation of the teacher competencies of the bachelor (S-1) students of Teacher Training Institutions.
- e. The final product of this research and development is *Nyantrik* Learning Model equipped with its implementing guidelines. This learning model can be disseminated to all of stakeholders directly related to the formation of the teacher competencies of the bachelor (S-1) students of Teacher Training Institutions and the policy makers.

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