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The Impact of E-Training Model on the Improvement of Professional Competence of PAUD-DIKMAS Educators

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Abstract

The face-to-face training that has been carried out all this time is considered incapable to fully improve the professional competence of trainees. So, it is needed an E-training model which is based on the needs of the trainees. The purpose of this study were: (a) to find out and analyze the E-Training model implemented in the training of PAUD-Dikmas Educators and, (b) to analyze the impact of the implementation of E-Training models on the improvement of professional competence of PAUD-Dikmas Educators. The subjects of this research were the management and trainers, 8 people in total, to reveal data related to model design and 120 trainees (PAUD-Dikmas Educators) to reveal data about the impact of E-Training model implementation. The data collection methods used were interview and questionnaire. The techniques used to analyze were descriptive-quantitative statistical analysis. The results of the study showed: (a) the implementation of E-Training model follows the flow of activities: training problems and needs analysis, training socialization and trainees recruitment, training planning, training learning process including independent learning, assignment, unit evaluation, and mentoring, comprehensive evaluation through independent assignments, they are given a certificate if they passed, and follow-up in the form of competency tests, and advanced training; and (b) the implementation of the E-Training model had an impact on the improvement of professional competence of PAUD-Dikmas educators.

Keywords: e-training model, professional competence

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1. Introduction

The success of the implementation and management of a unit of non-formal education is a reflection of the implementation of guidance on the performance continuously. The guidance is a necessity on the improvement of quality in the global era that is characterized by increasing competition in all aspects of life. It is realized that the success of the PAUD-Dikmas unit learning service is inseparable from the guidance of educators quality performance, one of which is PAUD-Dikmas educators. The existence of PAUD-Dikmas educators who are professional and dignified is an absolute requirement for

the presence of system and quality practices education. Therefore, an effort to support the existence of professional educators as the main task is continuously carried out in training. PAUD-Dikmas educators are the key players for human resources development in the future. So, they have to master science and technology in order to fulfill the demands of globalization and transformation. In preliminary research, it was obtained an information that the training held by PP-PAUD-Dikmas, Central Java, has been carried out routinely through face-to-face model design, and has been initiated a training through E-Training model. Terms of education and online training has been known well, that is the process of improving human resource competence through internet. In other words, e-training web-based is a facility to improve competency without being limited by distance, space, and time. A research finding about the use of E-training ini improving competency showed a positive impact. The research results done by Andrew, Teetor, and Stephen [1] stated that online training can fully develop in all aspects of competency. Prasetnya stated that as an alternative of traditional training which has been running before, online web-based model which is cheap can gives more open choices in accordance with the needs and customers ability who have limited time and are difficult to reach the training location [2]. Lawrence, RJ [3] stated that the training design used is influencing the behavior or acts, especially in the training participants' achievement. The purposes of this study were: (a) find out and analyze E-Training model implemented in the training of PAUD-Dikmas Educators, and (b) analyze the impact of the implementation of E-Training model on the improvement of professional competence of PAUD-Dikmas Educators.

2. Literature Review

Commonly, training is a part of education that illustrates a learning process to improve someone's ability to finish his/her works. According to Knowles [4] training is a process that creates condition and stimuli to emerge responds to other people, develop knowledge, creativity and attitude, create changes on behavior, and achieve specific purposes. The above definition gives us an understanding that the main idea of training is a process used to meet the needs of trainees. Internet technology is one of the products of the development of information and communication technology which has important role in improving the quality of human resources. Nowadays, it can be said that human dependence on the internet is quite high. The internet has intersected with work and professional activities and has even become familiar in daily lives of many people. Internet provides easiness and speed in reaching the information related to many things

including the training materials. The use of internet in supporting profession and working activities become so important and it most likely will be the need and a must in the future. The important thing in training is how to arrange and implement the training program which is able overcome problems or obstacles that disturb the main task and function of the trainees. Training is an intentionally purposive and controlled effort to make people learn and change their behavior which is relatively static as the result of their experience. Another opinion [7, 8] said that the empowerment management and human resource through accurate training can increase the organization performance. The organization performance which is low is caused by less quality planning and organization climate that does not support it. Thus, the training will bring impact on the improvement of professional competence of PAUD-Dikmas educators that is materialized in the context of mastery. They are the understanding toward the students, planning the learning, conducting evaluation of teaching, and post-learning motivation component.

The results about E-training [9] showed that E-training model can be a training focusing on critical thinking and less memorizing and gives us path to continuously develop scenario-based training which is more interesting. Another finding explained that E-training model correlates with the improvement of professional competence [1, 10]. It is appropriate with the research results which showed that effective planned training model can be helpful for trainees to relate what they already knew with what they expect from the training and to build new knowledge from the analysis and synthesis in the learning process [11, 12].

3. Method

This study used descriptive-qualitative design. Through this study was formulated : (a) E-training model design to improve Professional competence of PAUD-Dikmas Educators, and (b) analyze the impact of E-training model implementation on the improvement of Professional competence of PAUD-Dikmas Educators. The stages of this research was started from Literature Studies and study about the training model of E-training; survey to reveal E-training model; model findings; and analysis the impact of E-training. Thes ubjects of this research were the management and trainers, 8 persons in total; and 120 trainees to reveal data related to the impact of E-Training model implementation. The research focus of E-training model design that was implemented covering stages or process of activities that were done starting from trainees recruitment and needs analysis of the training, training planning, training implementation, and evaluation and training follow up. The training impact variables dealing with sub variable context included the

understanding on students, the expertness in learning planning, the learning implementation, plan and conduct learning evaluation, and sub variable motivation after learning. The data collection methods used were interview and questionnaire. Interview was done to reveal E-training model design that was implemented and questionnaire was used to reveal data of the impact of E-training implementation. The findings of E-training model design that had been implemented was analyzed in descriptive-qualitative way; while the impact of E-training model implementation was analyzed using analysis technique of descriptive-quantitative statistics with explanation through table.

4. Results

4.1. Results of the research

4.1.1. Design of E-training model

Data about the implementation of E-training model for PAUD-Dikmas educators which was conducted by P2PAUD-Dikmas Jawa Tengah, revealed through interview with training organizer and the trainer. The E-training model design was created with the aim to improve the professional competence of PAUD-Dikmas educators through procedural activities mechanism based on the principles of the training. The findings of the study indicated that the E-Training model design was created as a guideline for the implementation of the training in its entirety, starting from problem analysis and training needs to follow-up training activities according to adult learning characteristics, systematically explained, equipped by training learning materials, which contains detailed activities: (a) problem and training needs analysis; (b) socialization and trainee recruitment; (c) training planning, (d) the training learning process includes independent learning, assignment, unit evaluation, and mentoring; (e) Comprehensive evaluation through independent assignments, certificate is given if they passed; and (f) follow-up in the form of competency tests and advanced training. The E-Training model design implemented in the training of PAUD-Dikmas educators was described in Figure 1 below:

The process of recruitment activity was done by field officer through participant socialization, followed by collecting participant and validating the system. The details of recruitment activities were described in Figure 2 below.

The three stages training activity were (a) pre-learning (1 month) which consists of coordination meeting, sosialization, recruitment; (b) learning process (1,5 month) which consists of participants enter the system, download pdf / audio visual materials,
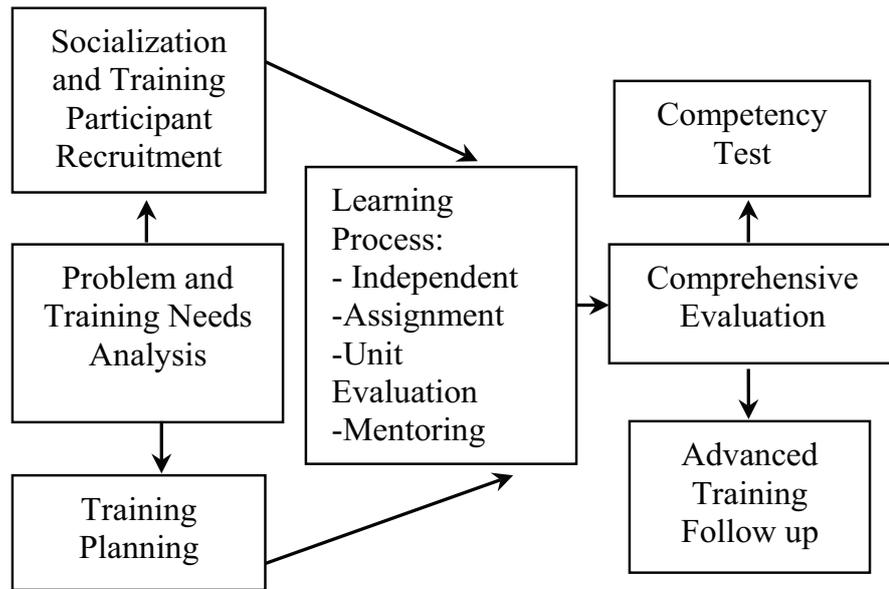
Figure 1: The E-training model design implemented in the training of PAUD-Dikmas Educators.
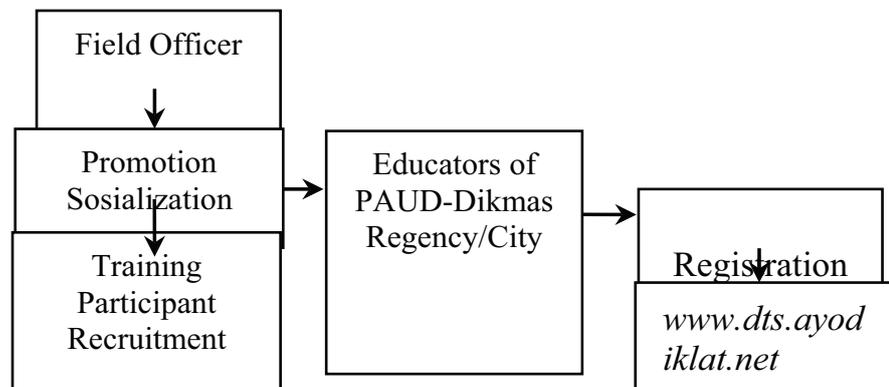

Figure 2: Need analysis process, socialization and training participant recruitment.

evaluation of each material, comprehensive evaluation; and (c) if the passed a working trial (25 working days) by creating product and papers. Figure 3 below describes the stages of training activities through E-training.

Mechanisms and procedures in evaluating learning outcomes, the training was done by comparing pretest and post test for cognitive aspects, assignments for psychomotor/skills and sociometry for attitude/behavior. The validity of the training learning outcomes was used to determine the participants who can continue to the next stage, namely the independent assignment. To be able to take part in the independent assignment, the score of a comprehensive evaluation was at least 75 or more. Participants who have not yet reached 75 were declared as fail and could try it again next year.
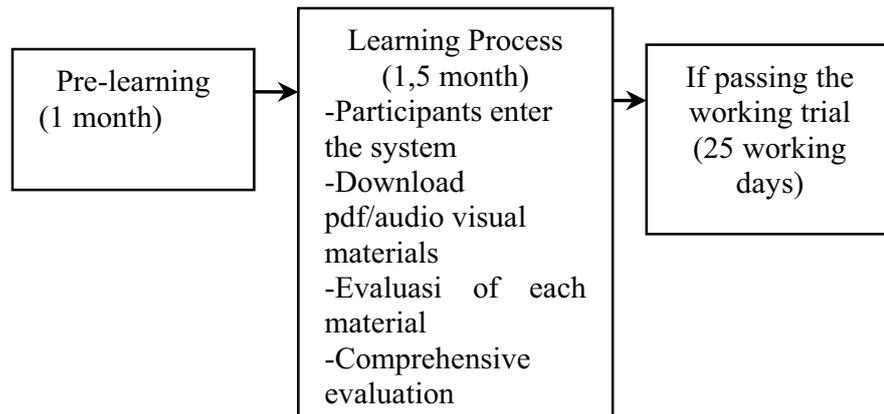
Figure 3: The stages of E-Training activities in the training of PAUD-Dikmas Educators.

4.1.2. The impact of E-training implementation

The research findings of the impact the web-based e-training model to improve the professional competence of PAUD-Dikmas' educators in the learning context component which includes the understanding of students, skills in designing the learning, implementing the learning, designing and implementing learning evaluations, resulting in varied data. Based on the previous chapter, the results of respondents' answers were analyzed using descriptive-quantitative analysis. The results of the analysis of the learning context component are explained in table 1 below.

TABLE 1: The Overview Percentage of Learning Context Component.

Category	Frequency	Percentage (%)
Very high	23	19
High	83	69
Low	14	12
Very low	0	0
Total	120	100

Based on the table 1, it shows that the understanding of the students of PAUD-Dikmas in the context component, few of them were in the low category of 12%. Most of them were in the very high category of 19%. While the highest domination is 69% in the high category. This means that almost all PAUD-Dikmas educators have a high understanding of the learning context. Further examination from the aspect of students' understanding, shows that PAUD-Dikmas educators understand the students in very high category (36%), high category (38%), and low category (26%). Thus, it can be stated that the understanding of PAUD-Dikmas educators on: (a) the students was in high category (38%), (b) designing the learning was in high category (52%), (c) implementing

the learning was in high category (62%) and (d) design and carry out learning evaluations was in high category (50%)..The results of the analysis of motivation components of post-training are explained in table 2 below.

TABLE 2: The Overview Percentage of Post-Training Motivation Component.

Category	Frequency	Percentage (%)
Very high	24	20
High	86	72
Low	10	8
Very low	0	0
Total	120	100

Based on Table 2 above, it was stated that the implementation of E-Training model in the training of PAUD-Dikmas educators had a positive impact on the strong growth of motivation (72%) of the trainees, after training. Indicators of strong post-training motivation were the willingness to improve the performance, active and happy in doing work, enthusiasm in doing work, innovation in doing work, confidence in doing work, initiative, and a pioneer of change for the work environment.

The next step was conducting an impact analysis of the training by comparing the results of the pretest and posttest of the trainees, followed by testing for normality and homogeneity. The results of the Kolmogorov-Smirnov calculation obtained a pretest score with the Sig. 0.174 and posttest with a value of 0.200 which means that it was greater than the significance level of 5% or Sig. 0.174 and 0.200> t.s 0.05, so it could be concluded that the data distribution for pretest and posttest was normal. Homogeneity testing results using Levene Statistic technique and assisted with SPSS software (Statistical Program for Social Science) version. 23 for windows obtained Sig. 0.337 which means that it was greater than the significance level (t.s) 0.05 or Sig. 0.337 > t.s 0.05, so it could be concluded that the data obtained from two groups of values come from populations that have homogeneous variance. Furthermore, to find out the impact of the implementation of E-Training model, the difference between pretest and posttest results was tested, with a confidence level = 95% or (t.s) = 0.05. The degree of freedom (df) = n-k-1 = 120 - 2 - 1 = 117, and the two-sided test was obtained from the value of t 0.05 = 2.003. Table 3 below shows the results of the pretest and posttest analysis.

The results of statistical testing on paired statistical sample table above obtained the average value of the pretest (before the training was carried out) was 86.92 while the average posttest score (after the training was implemented) was 90.87. The correlation between pretest data and posttest data was 0.207 with a probability of 0.024 <5%,

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	86.9237	120	4.88489	.44593
	Postest	90.8709	120	5.19167	.47393

this showed that the increase in students' scores from pretest to posttest was equally distributed. In other words, pretest data had a significant relationship with posttest data. In the paired sample test table obtained the t value = 1.657 with a sig value of 0.000 <0.05. Thus, the impact of implementing the E-Training model could improve the professional competence of PAUD-Dikmas educators.

5. Discussion

Training is needed when the work requires individuals to have some skills, knowledge or attitudes that are different from or beside what they currently have, so that they are expected to adjust themselves to the main tasks and functions in accordance with the demands of work and the development of science and technology. Thus, the training conducted must be based on real problems and needs felt by PAUD-Dikmas educators in improving their professional competence. This is in accordance with the view of Friedman and Yarbrough [13] which provides direction on the need of training. The definition above gives us an understanding that the main idea of training is the existence of a process that is used to meet the real needs of the trainees, with the development of new innovations according to the demands of development. The training learning process is a system, learning has more meaning than teaching as it is understood as the presentation of teaching materials. The term didactic procedure according to [14, 15] is a management activities carried out by educators during the learning process, so that participants can achieve instructional goals in the most effective way. The development of new knowledge is how an organization can use training model effectively in order to achieve the excellence through some innovative models [16]. The E-training model design implemented based on research findings had a positive impact in improving the professional competence of PAUD-Dikmas educators, manifested in proficiency in designing, implementing the learning, and designing and implementing learning evaluations. This finding is in line with the research innovations created that have a positive impact on the success of the training and also in line with the research findings of Andrew See & Travis Stephen Teetor [1] stated that online training had an impact on the performance of trainees. Other findings stated that innovative training models

have an impact on work productivity [17, 18]. Other findings suggest that training that is designed to the maximum can increase participants' work motivation after training [19, 20].

Thus, it can be emphasized that the impact of implementing E-Training can improve the professional competence of the trainees. Training performance indicators are defined as quantitative and/or qualitative measures that describe the level of achievement of a predetermined goal or aim. Achievement of performance indicators in the form of professional competence improvement is taken into consideration in designing follow up of post-training activities.

Besides, the research findings on the implementation of the E-Training model also have an impact on the growth of post-training work motivation that is realized through the willingness to improve performance, active and happy in doing work, working spirit, innovative in doing work, confidence in doing work, initiative, and a pioneer of changes for working environment. This findings are in line with the research [19, 20] revealing that the effectiveness of training has a significant influence on the working improvement motivation, with e-training, the more motivation increases the training effectiveness will also increase. Meanwhile, Ramayah, Ahmad, and Hong [9] stated that E-Training has an effect on cost effectiveness, flexibility, comfort, and work motivation. Other finding explained that training with model that is designed appropriately by using media has an impact on motivation towards improving work [21, 22].

6. Conclusion

The conclusions of this research are:

1. The E-training model design implemented consists of the stages of activity: training problems and needs analysis, socialization and trainees recruitment, training planning, training learning process including independent learning, assignment, unit evaluation, and mentoring, comprehensive evaluation through independent assignments, they are given a certificate if they passed, and follow-up in the form of competency test, and advanced training.

2. The impact of the implementation of the WEB-based E-Training model is that it can improve the professional competence of PAUD-Dikmas educators, concerning the aspects improvement of understanding of students/learning citizens, skills in designing the learning, implementing the learning, designing and conducting learning evaluations, and post-training motivation.

Based on the research findings and discussion, the suggestions are presented below:

1. In order to conduct more complete training through E-Training, it is needed a follow-up in the form of advanced training concerning to the map of the professional competence mastery of the trainees.

2. The implementation of the WEB-based E-Training model had an impact in improving professional competence. Therefore, it needs to be developed in similar training with some modifications based on the needs of the trainees.

3. The implementation of E-Training model requires participation and support from regional government. Therefore, the manager of the training program needs a support for the sustainability of the activity, such as infrastructure and financial.

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