

# My Research Plan

## 1. Topic

### **“Implementation and Evaluation of e-Learning on Industrial Competency-Based Training in Indonesia”**

Training in Indonesia is based on a program called CBT (Competency-Based Training). This program has been adopted for the last few years, but the implementation is still using the old traditional training style where the teacher (instructor) and student (trainee) is using the face-to-face classroom style. In this globalization era, the e-learning is a new method of utilizing internet and computer technology on education/training field. Indonesia as a developing country is trying to keep up with this new method of education/training. Implementing e-learning in Competency-Based Training is a new approach in order to optimize the efficacy of technological usage in Indonesia and eventually will improve the quality of the trainee itself.

## 2. Research Problem

The research theme should be carefully examined to find the problem. For this particular theme, I should build a framework of determining problem such as:

Who: the appropriate institute or department that currently in charge of conducting competency base training. In Indonesia, education and training is distinguished into two different government's department. Education is under the Department of National Education, and training is under Department of Manpower and transmigration (this is my affiliation department in which I served as an instructor).

When: The research (experimental training) shall be conducted on 2009.

What: Implementing e-learning on the industrial competency-based training and evaluating the result of this new method of training.

Where: Government's Industrial Vocational Training Centre in Indonesia, especially in Samarinda, East Kalimantan (it also can be held in different region in Indonesia, but still on an Industrial Vocational Training Centre belongs to Government of Indonesia).

How: Create a new e-learning material from a certain competency unit, implement it, evaluate and analyze the result of the e-learning.

Expected result: e-learning method is a better way to conduct a competency-based training program, indicated by the score and trainee's satisfactory level (this can be the hypothesis of this research).

The problem in the current Competency-Based Training in Indonesia is that it didn't utilize the technology-based educational system. The new method of e-learning is proposed to solve this kind of problem and hopefully to gain better result on the training process.

### 3. Literature Research

The research theme results of 12.900 entries in Google search engine ([www.google.co.id](http://www.google.co.id)). Additional term 'Indonesia' on the research theme keywords results of 4.290 entries. A brief inspection reveals many interesting website as information resources that can be used later. On the ERIC website ([www.eric.ed.gov](http://www.eric.ed.gov)) the research theme keywords result 0 entries. The keywords "competency base training" results 4236 entries. This is too much to be searched. I will try to search on another academic journal website later on. Off line literature research in the OIC library results (for now) 2 articles on 2 academic journals: International Journal on e-Learning vol.5, no.3 2006 and Educational Technology Research and Development vol.55 no.4 August 2007. These two articles will be my initial literature research on e-learning and competency-based training.

### 4. Research Questions

I try to state my questions for the research:

- ❖ What is Industrial Competency-Based Training and how is its current implementation in Indonesia?
- ❖ What is e-Learning and are there any e-Learning materials for Industrial Competency-Based Training built and applied in Indonesia?
- ❖ What is the most appropriate way of designing and implementing e-Learning for Indonesian Industrial Competency-Based Training?
- ❖ How to evaluate and analyze the result of the e-learning method that will be implemented?
- ❖ Are there any significant results of the e-learning method that can be regarded as indication of efficacy improvement?

### 5. Research Design

The approach for this theme is descriptive studies and experimental-type design. Descriptive studies are mainly for literature and data research which consists of Competency-Based Training in Indonesia, the previous methods of training, and the new method of e-learning. The actual data of current training method can be obtained on the database of the institution.

Experimental-type design is on how to create the e-learning material and implement it in the real training. The result of the training will be analyzed and compared to the initial hypothesis of the e-learning method training outcome.

Additional data such as observation of the trainee, interview, questionnaire to measure the satisfactory level of the trainee, can also be attained in order to build a comprehensive qualitative and quantitative database for further analysis.

## 6. Methods of Research

Participants required for this research should be around 32 trainees (the number of trainee in a class is 16 trainees), high school graduate with minimum skill of computer operation or less. These trainees are from government's annual project of industrial training in our Industrial Vocational Training Centre. Possibly an additional instructor is also needed in order to conduct the computer operation preparation subject for the trainees who are not computer literate.

Material and Instrumentation needed for this research are: e-learning material for a specific subject (I prefer to use more common subject such as Industrial Safety for two particular reasons: it is easier to obtain participant from different training courses and it has the less psychomotor skill compare to other subject), the test (entry test, pre test, and post test) to measure the outcome of the e-learning, observation checklist, interview questions, and questionnaire form to obtain participant's view about e-learning process. The material will be derived from the old available material but with some adjustment to fulfill the instructional design requirements.

Procedural plan for this theme is conduct the literature research whether using offline material (books and journals on the library) or online material (information from the internet), build an e-learning material, implement the e-learning material to the experimental trainee, evaluate and make analysis about the outcome data and make a conclusion.

## 7. Data Analysis Procedure

On this theme descriptive studies will be used. Descriptive studies can use both qualitative data sources and quantitative data sources. The quantitative data should be the score of the pre and post test, the questionnaire and the observation checklist. The qualitative data is the interview result and the opinion from the trainee (this is very subjective data, it might be needed other analysis method).

### ***Summary of My Research Plan***

Indonesia as a developing country has been trying to adopt the Competency-Based Training method to improve the quality of human resource as competitive work labor. However, the implementation of this method is still using the old traditional way of classroom teaching. This research will try to see the implementation of e-learning in the competency-based training especially in Industrial Vocational Training Centre in Indonesia and the evaluation on how e-learning can improve the training process. The subject is 2 classes (32 trainees) which will attend e-learning methods of training. The material of the training will be presented as e-learning material based on instructional system design. The expected result is that outcome of the e-learning shows e-learning is a better method on conducting training for industrial purposes. The general impression of the trainee using e-learning method will also be analyzed in relation with satisfactory level.