

The Enhancement Model of ICT Competence for The Teachers of SMP Terbuka in Central Java to Support Long Distance Learning Program

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The Enhancement Model of ICT Competence for The Teachers of SMP Terbuka in Central Java to Support Long Distance Learning Program

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ABSTRACT. ICT-based learning for SMP Terbuka is a manifestation of the first pillar of DEPDIKNAS Strategic Plan 2005-2009, about the use of ICT as the facility of long distance learning. By implementing ICT-based learning, the communication between the teacher and the students is possible to happen although both parties are in different places. The problem in implementing ICT-based learning for SMP Terbuka is the low competence of the teachers in ICT mastery, because this research is aimed to formulate the enhancement model of ICT competence for the teachers of SMP Terbuka in Central Java to support long distance learning program. This research shows that Supervised-Teachers and Tutor Teachers Competence in ICT is still low with the average of Supervised-Teachers competence in operating Ms.Word application of 59.6%, Ms.Excel 55.40%, Power Point 43.40% and internet mastery of 41.8%; while the competence of Tutor Teachers is lower with the average of 40.40% in operating Ms. Word, 35.20% in Ms.Excel, 28.00% in Power Point, and 29% in internet mastery. It means that Supervised-Teachers understand ICT, but they do not master it; while Tutor Teachers have just understood ICT and have a low mastery in Ms.Word. The output of this research is: The new findings of the enhancement model of ICT competence for the teachers of SMP Terbuka in Central Java to support long distance learning program.

INTRODUCTION

Based on the Act of National Education System (Sisdiknas) No.20/2003 Chapter VI Article 135 to 140, Long Distance Learning (LDL) is an education system in which the students are separated from the teacher and the learning process uses some learning sources through ICT and other media. LDL is implemented in some levels, paths, and forms of education. SMP Terbuka is a program which was initiated by the Department of National Education (Depdiknas) in 1979/1980 as an effort to provide education service for the 13-15 years old or maximum 18 years old children graduated from Elementary School and Madrasah Ibtidaiyah who were categorized as less fortunate in economy, geographic, and had no time to study. SMP Terbuka is one of formal education sub-system that uses independent learning principle, or learn with minimum help or guidance from others. In other words, generally the principle of SMP Terbuka is in terms of learning time and places adjusted with the students' condition (Directorate of Junior High School Development, 2009).

In the beginning of academic year 2009/2010, Directorate of Junior High School Development started to use ICT in the learning process of SMP Terbuka, which was initiated through the implementation of ICT-based learning. This program was an initial activity of the plan to implement SMP Terbuka with Long Distance Learning which was expected to begin in 2014. In academic year 2009/2010, some experiments related to ICT-based learning were conducted in 3 pioneering schools, such as SMP Terbuka Tanjungpriok Jakarta, SMP Terbuka Kandanghaur Indramayu, and SMP Terbuka 1 Malang, followed by SMP Terbuka Tengaran Semarang Regency and SMP Terbuka South Tangerang in 2013.

The findings of monitoring and evaluation by Trisnani and Dwi Purwanti (2012) as the Independent Team to evaluate the pioneering of SMP Terbuka which was tested in three schools shows that the teachers in SMP Terbuka who are competent in ICT are less than 30 %. Based on the result, the researchers formulate the enhancement model of ICT competence for the teachers of SMP Terbuka in Central Java to support long distance learning program.

SPECIFIC PURPOSE OF THE RESEARCH

The specific purpose of this research is to reveal the following things:

1. Conducting an evaluation whether the recent policy in enhancing ICT competence of the teachers in SMP Terbuka has run well and able to enhance the teachers' competence in all aspects.
2. Formulating the enhancement model of ICT competence for the teachers of SMP Terbuka in Central Java to support long distance learning program.
3. Doing a trial and implementation of the model that has been formulated to enhance ICT competence for the teachers of SMP Terbuka in Central Java.

SIGNIFICANCE OF THE RESEARCH

The output of this research is the design of the enhancement model of ICT competence to support long distance learning program. This model is expected to give some significances as an input for the decision maker in the authorized-institution especially the Directorate of Junior High School Development. This model is expected to be implemented as the development model of competence enhancement of the teachers in SMP Terbuka, especially to support the implementation of SMP Terbuka with Long Distance Learning.

RESEARCH APPROACH

This research consists of two steps. The first step was evaluation towards the policy of competence enhancement of the teacher in SMP Terbuka which has been implemented in Central Java recently. This evaluation was conducted by using or modifying the development research design into four steps, namely (1) the organization of evaluation and instrument draft, (2) the organization of evaluation instrument, (3) data collection, (4) data analysis.

The second step used Research and Development approach. It is a research which is followed up by the development through problem identification process – model making – model testing – replication and development. The problems were evaluated by qualitative and quantitative approach based on the research design.

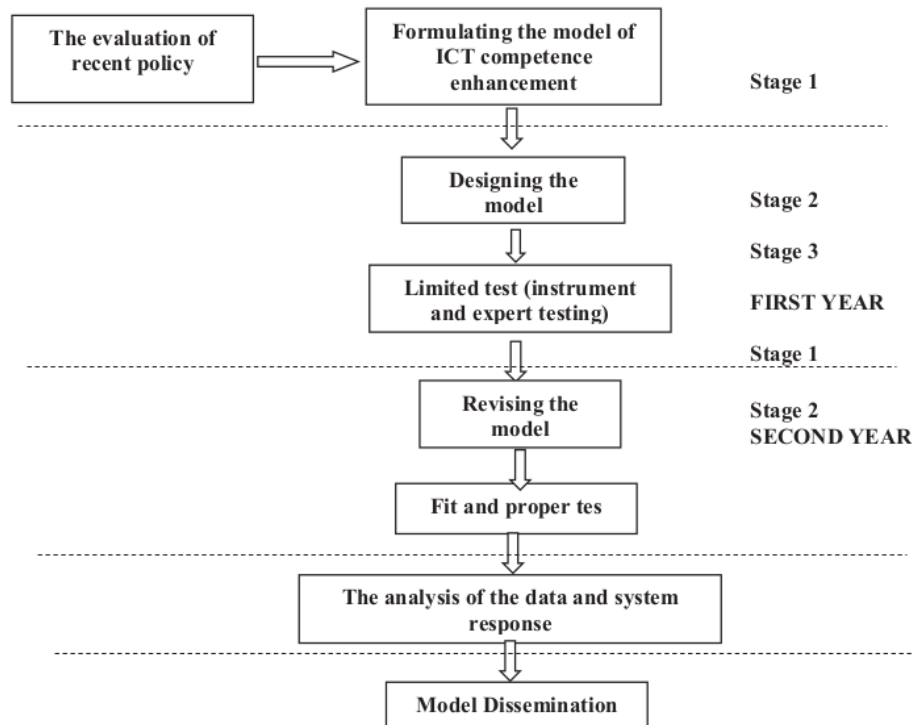


FIGURE 1. Research Design

DATA COLLECTION AND INSTRUMENT

The data collection for the first and second stage was done by survey, questionnaire, evaluation form developed by researchers, and document study. Previous relevant study and theoretical study were also conducted to support the data.

Data Analysis

According to the characteristics of the evaluation, the data from questionnaire and response to data were analyzed using comparative-descriptive by some tables (rows-columns, contingency, frequency distribution, cumulative frequency distribution, relative frequency distribution, and cumulative relative frequency distribution) and diagrams (bar and pie chart). The output of the workshop was the number of participants that met the criteria and received a certificate.

Research Output

The outputs of this research are:

1. The new findings in the form of the enhancement model of ICT competence for the teachers of SMP Terbuka in Central Java to support long distance learning program.
2. The result of this research will be published as scientific paper in national journals (Journal of Education of Malang University) and national seminar.

Sample and Research Location

In this reserach, the researchers used 20% of the population, or 3 regencies which were randomly chosen.

TABLE 1. The details of the sample

| No | School | Regency | Total | |
|----|--------------------------------|---|--------------------|---------------|
| | | | Supervised-Teacher | Tutor Teacher |
| 1 | SMPT Subah, Batang | Jln. Jend. Sudirman Timur Subah Kab Batang | 11 | 10 |
| 2 | SMPT Gringsing, Batang | Jl. Raya surodadi, Gringsing – Batang | 12 | 6 |
| 3 | SMPT Kandeman-Batang | Jl. Kandeman- Batang | 16 | 6 |
| 4 | SMPT Limpung Batang | Jl. Cokronegoro 20 Limpung – Batang | 16 | 8 |
| 5 | SMPT Bandar Batang | Jl. Raya Sidomulyo Bandar Batang | 12 | 3 |
| 6 | SMPT Bawang Batang | Ds. Pangempon Bawang Batang | 13 | 16 |
| 7 | SMPT Bansari-Temanggung | Jl. Sawit – Bansari- Temanggung | 9 | 3 |
| 8 | SMPT 1 Pringsurat | Ds.Kebumen- Pringsurat- Temanggung | 6 | 4 |
| 9 | SMPT 2 Pringsurat | Ds.Kebumen- Pringsurat- Temanggung | 6 | 4 |
| 10 | SMPT 1 Tretep Temanggung | Jl. Rejosari- kec.Wonoboyo- Temanggung | 7 | 4 |
| 11 | SMPT 1 Tirto Pekalongan | Jln. Raya Pacar 184 Tirto Pekalongan | 8 | 5 |
| 12 | SMPT 1 Wonokerto Pekalongan | Desa Wonokerto Metan Pekalongan | 7 | 5 |

FINDINGS AND DISCUSSION

The Data of the Teachers' Competence in ICT

Based on the results of competence test of the supervised teachers and the tutor teachers in ICT in every sampling schools, the recapitulation of the supervised and the tutor teachers average competence can be seen as follows:

TABLE 2. Supervised Teacher

| RESPONDENTS' SCHOOL NAME | THE AVERAGE SCORE OF ICT COMPETENCE | | | |
|-----------------------------|-------------------------------------|-------|-------------|----------|
| | WORD | EXCEL | POWER POINT | INTERNET |
| SMPT SUBAH | 2.73 | 2.82 | 1.91 | 1.91 |
| SMPT GRINGSING | 3.00 | 2.92 | 1.75 | 1.58 |
| SMPT KANDEMAN | 2.19 | 2.19 | 1.94 | 1.25 |
| SMPT LIMPUNG | 2.94 | 2.38 | 2.38 | 1.75 |
| SMPT BANDAR | 3.67 | 3.67 | 3.58 | 2.17 |
| SMPT BAWANG | 3.08 | 2.54 | 2.00 | 2.54 |
| SMPT BANSARI | 2.00 | 1.89 | 1.56 | 1.33 |
| SMPT PRINGSURAT 1 | 2.67 | 2.33 | 1.83 | 1.83 |
| SMPT PRINGSURAT 2 | 4.17 | 4.00 | 2.67 | 3.50 |
| SMPT TRETEP | 2.86 | 2.43 | 2.00 | 1.86 |
| SMPT TIRTO 1 | 3.13 | 2.88 | 1.88 | 2.63 |
| SMPT WONOKERTO | 3.29 | 3.14 | 2.14 | 2.71 |
| MEAN (TOTAL AVERAGE) | 2.98 | 2.77 | 2.17 | 2.09 |

TABLE 3. Tutor Teacher

| RESPONDENTS' SCHOOL NAME | THE AVERAGE SCORE OF ICT COMPETENCE | | | |
|-----------------------------|-------------------------------------|-------------|-------------|-------------|
| | WORD | EXCEL | POWER POINT | INTERNET |
| SMPT SUBAH | 2.70 | 2.70 | 1.80 | 2.00 |
| SMPT GRINGSING | 2.33 | 1.33 | 1.33 | 1.00 |
| SMPT KANDEMAN | 1.67 | 1.67 | 1.17 | 1.17 |
| SMPT LIMPUNG | 1.50 | 1.00 | 1.00 | 1.00 |
| SMPT BANDAR | 1.67 | 1.67 | 1.67 | 1.00 |
| SMPT BAWANG | 2.88 | 2.81 | 1.81 | 2.44 |
| SMPT BANSARI | 1.00 | 1.00 | 1.00 | 1.00 |
| SMPT PRINGSURAT 1 | 1.00 | 1.00 | 1.00 | 1.00 |
| MPT PRINGSURAT 2 | 3.50 | 3.50 | 3.00 | 3.00 |
| SMPT TRETEP | 1.75 | 1.00 | 1.00 | 1.00 |
| SMPT TIRTO 1 | 2.00 | 1.60 | 1.00 | 1.20 |
| SMPT WONOKERTO | 2.20 | 1.80 | 1.00 | 1.60 |
| MEAN (TOTAL AVERAGE) | 2.02 | 1.76 | 1.40 | 1.45 |

Notes :

The scoring instruments of teachers' competence in ICT was obtained in the range of 1 to 5 with the following details :

- Score 1 = very low = achieving 20% of the competence
- Score 2 = low = achieving 40% of the competence
- Score 3 = enough = achieving 60% of the competence
- Score 4 = good = achieving 80% of the competence
- Score 5 = very good = achieving 100% of the competence

The Discussion of the Findings

Based on the running program execution, which never holds any training to develop teachers' competence of ICT, the effects was crystal clear in the findings of supervised teachers' and tutor teachers' competence in ICT in the previous table. For the supervised teachers, the average competence score for Microsoft Word is 2,98 or achieving 59,6% of the competence, 2,77 or achieving 55,40% of the competence for Microsoft Excel, 2,17 or achieving 43,40% for Microsoft Powerpoints, and 2,09 or achieving 41,80% of the competence for Internet mastery. This results show that the supervised teachers have very low competence in ICT in mastering all computer application or internet access. In mastering the word application program, the competence score was 59,6%. It means that even if the supervised teachers are able to make a text, pictures and tables, but, the ability of the teachers is limited only in knowing and understanding the basic use of it. Moreover, their understanding are lower in using MS. Excel and MS. power point which needs the mastery of using MS Word. Likewise, the internet mastery of the teachers scored 41,80%, showing that the supervised teachers only understand the lowest layer of internet usages, but, they cannot use it in the internet in the next level.

Other low results were shown in the tutor teachers' competence in ICT, their total average score was 2,02 or achieving 40,4% of the competence of MS Word, showing that the tutor teachers only know what MS Word is, but, they are not able to master the application. Their masteries of using MS Excel and power point are very low which were scored 1,76 or achieving 35,2% of the competence for Excel and 1,4 or achieving 28% of the competence for power point. This results showed that the tutor teachers have just known the applications and do not understand to use them. Similar result also occurred in their masteries of using internet which was scored 1,45 or 29% which states that the tutor teachers have just known the internet.

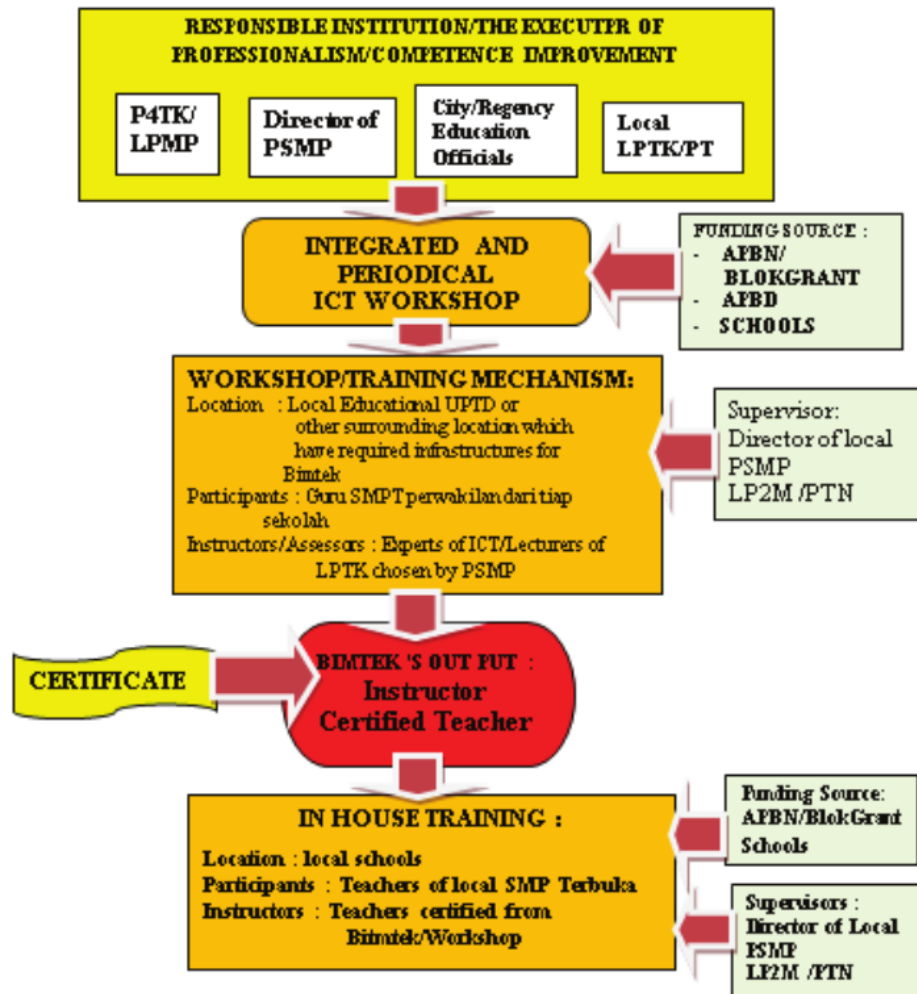


FIGURE 2. The model to improve the ict competence of SMP terbuka teachers

CONCLUSION

Based on the results, it can be stated that the competence level of the supervised and the tutor teacher in ICT is very low an incapable to do a long distance learning based on ICT. Thus, if the PSMP Directorate is going to launch long distance learning, the competence of the supervised teachers and the tutor teachers in ICT should be improved. The model to improve the competence should be formulated as the outcome of this research to help the supervised teachers and the tutor teachers through more integrated and more comprehensive external or internal training systems by involving related party and networking connection, so, it will results many teachers of SMP Terbuka who are able to fulfill the standards of education practitioners for ICT-based long distance learning program.

SUGGESTIONS

Based on the conclusion of the research, there are several suggestions proposed by the writer:

1. The Directorate of Junior High Schools Supervisor of Ministry of Education and Culture should make a follow up of this formulated competence improvement by executing trials and doing a network with another parties proposed in this research.
2. The teachers of SMP Terbuka whether supervised or tutor teachers should improve their competence in ICT independently, since to execute the learning process management of ICT-Based learning, teachers are insisted to be professional with their required competence as the education practitioners.

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