A Model for Upgrading Teachers' Competenceon Operating Computer as Assistant of Instruction

Muhammad Kristiawan[1]

[1] State University of Padang

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Abstract

This research based on a preliminary study that the quality of teachers in Indonesia nowadays not much different from 2007. The teachers did not apply ideal teaching strategy, they did not realize the change of school based curriculum into curriculum 2013. The result of preliminary observation revealed that the teachers could not operate computer as well, the national result of teachers' competency test on August and October in 2012 was lowand also UNESCO (2011) stated that ICT in education policies have to tackle teacher competencies, learning materials, ICT equipment, student and teacher's motivation.This study was aimed at implementing A Model for Upgrading Teacher's Competence on Operating Computer as Assistant of Instruction. This study related to recent research at Saudi Arabia, Turkey, India, United State of America, Iran, Kenya and Tanzania that the computer assisted instruction as a supplementary instructional strategy in effective teaching, it includes providing teachers with professional development, and in order to successfully implement ICT in educational practice.A Research and Development (RD) approach was conducted in this study. Ninety four (94) secondary school teachers were selected as sample by using purposive technique from five hundred fifty (550) populations that were used as pilot test to determine the effect of this model toward the teachers' competence on operating computer.

Index terms— model, teacher's competence, operating computer, instruction.

1 Introduction

his research started from a preliminary study that the quality of teachers in Indonesia nowadays not much different from 2007 before there was a teachers' certification (Media Indonesia, November17 th , 2012). According to World Bank (2013: 73) teacher's certification"?shows no significant impact on learning outcomes". While the budgetary costs for this program was not less (Media Indonesia, November21 st , 2012). The World Bank's conclusion was obtained after researching since 2009 in 240 public primary schools and120 secondary school in Indonesia, involving 39.531 students. Test resulted between students were taught teachers certified and not certified for Mathematics, Indonesian, English, and Natural Science were compared. As a result, there is no influence of the teachers' certification program toward students' learning outcomes, both in primary and secondary schools (World Bank, 2013: 71-72). Jalal (2012) at the World Innovation Summit for Education (WISE) in Doha, Qatar, on November 15 th , 2012 also described "the certification did not change the quality of learning in the classroom. Teachers' mastery of subject and the pedagogy was weak".

Professor of Education of New Zealand, John Hattie did a meta-analysis of more than 800 factors that affect the quality of education, the results were related to the teacher. "The quality of teachers had value doubled impact than the curriculum" (Media Indonesia, April 8th, 2013).There had been many studies which stated that the quality of teachers is low and needs to be improved, but the classical learning approach his still well-liked by teachers as efficient in the use of time, in addition, it is also economical and practical in delivering learning

content. Teachers argued that the classical learning approach will easily control the speed of teaching so it is easy to determine when the completion of the delivery of the entire contents of the lesson. However, admittedly not always learning with classical learning approach can take place properly. According to **??**ena, (2009: 202) negative symptoms often complained by the teacher that"?the students became quickly bored and dis not pay attention to the material".

Istiqomah & Sulton (2013: 2) stated that "?the low quality of teachers was seen from the results of the implementation of the Teachers' Competency Test (UKG) obtained results were quite alarming. Average grades UKG nationally was 44".

2 Table 1: Budget for Teachers' Certification

The findings revealed that a model was considered valid, practical and effective. This conclusion is relevance to both teachers and the educational policy in Indonesia. This research implies needs to be consideration not just of how to bolt and weld computer science into the curriculum, but also how to ensure that teachers remain equipped to teach pupils fundamental ICT skills. According to Istiqomah & Sulton (2013:2) "the low grade UKG teachers was influenced by many factors. Among these factors was the lack of teachers in pedagogy and less familiar for teachers to operate a computer". It was also indicated that "the training of teachers that had been done showed some weaknesses still occurred" as expressed by Kompas, December 29 th , 2012.

3 Score of Teachers

Based on several empirical studies, the drawbacks of computer use as assistant of instruction is considered one for the appropriate solution. Utilization of computers in instruction brings change tradition. Utilization of computers in the instructional system can be self-regulated learning (instructor independent) or also combined with the directly instructional process (face-to-face in the classroom) that rely on the presence of the teacher.

According to **??**ena (2009: 202) "instructional model/instructional resources related to ICT and now becomes the attention of the world is a computer assisted instructional model and learning through electronic media (e-learning) based web-based learning (WBL)". This is in line with the changes in the School Based Curriculum (KTSP) to Curriculum 2013. Where elements of the curriculum changes for secondary school is directed to "ICT becomes a learning tool (integrated) in all subjects, or do not stand alone" (Public Test Materials Curriculum 2013 Kemendikbud, November29 th , 2012).

From the preliminary observations made by researcher at the Secondary School teachers which consisted of 24 This research is also related to the late finding in Iran which was written by Karami, Karami & Attaran (2013) concluded that"?trainee teachers who integrate problem based learning with ICT in solving a problem may develop more professional content knowledge and teaching skill". This research is related to the finding in Tanzania which was released by Ndibalema (2014) concluded that "?low familiarity with ICT use as a pedagogical tool among teachers was found to be a problem. The use of ICT as a pedagogical tool in Tanzania seems to be a critical situation among teachers". Next, this research is also related to the research in Kenya which was produced by Nyambane & Nzuki (2014) that"?integrating technology into classroom practices is one of the challenges the 21 st century teachers face. Professional development, accessibility of ICT resources influence teachers' adoption and integration of technologies into their classrooms".

This research is presented because the computer will give new power in improving teachers' competence and students' motivation. This reason asks the education to utilize computer as assistant of instruction. Today's development issue about computer was written by Bennet (2012) that computer assisted instruction "?includes providing teachers with professional development, encouraging interaction, providing students with suitable technology, and selecting students with skills to work indepently". Next, Voogt, Knezek, Cox, Knezek & Brummelhuis (2013) also stated on their finding that seventy international policy makers, reseachers and practitioners of education "?developed a Call to Action, where policy, research, and leadership need to join forces in order to successfully implement ICT in educational practice".

Beechler & Williams (2012) supports this research where he found computer in United State of America"?assist ESL students learn basic sight words is effective and enhances motivation". Siddiqui & Khatoon (2013) also supports this research where he found computer assisted instruction India "?was more effective in enhancing the students' achievement in Physical Science than traditional instruction". Next, Premalatha (2012) stated on his finding that computer assisted instruction "?providing learners with conducive environment at school and home by motivating them to involve in studies and making learning interesting". Then, this research is related to the recent ICT policy on education based on UNESCO (2011: 1) ICT on education is to upgrade"?teacher competencies, learning materials, ICT equipment, student and teacher motivation". UNESCO (2011: 3) concluded that the framework of continuing teachers development in using ICT for"1) enabling students to use ICT; 2) enabling students to apply their knowledge to real-world problems; and 3) enabling students create the new knowledge required for more harmonious".

The exploring; assosiating; and communicating". Each phases which is related to ICT, the teacher should show the video or picture where is obtained through You tube; Adobe Photoshop and Macromedia Flash. Then, the teacher should ask the students to submit an assignment through Email and they calculate the scores by using Microsoft Excel. The model on this research is related to the finding in Ghana which was written by Amenyedzi,

Lartey & Dzomeku (2012), he found that internet and computer "?helped students to achieve new things such as finishing assignments, solving problems, learning history of other countries, improving typing skills, and chatting with friends". According to Amenyedzi, Lartey & Dzomeku (2012) "teachers used the internet as an innovative way of improving teaching and learning, used the Internet for e-mail and browsing and computer and Internet usage as supplementary educational material to enhance quality education". This research is supported by the research of Microsoft Word in Iran which was released by Kazem, Bafghi & Allami (2011) that Computer Assisted Instruction based Microsoft Word "?caused a statistically significant scores of the experimental and improved their language proficiency, this new method is much more effective compared to the traditional lecturing method". Then, this research is related to the finding of Microsoft Word in United State of America which was released by Stock meyer (2009) that the programs of Microsoft Word"?have made it almost as easy to assess the readability of a document as it is to check its spelling". Next, this research is related to the finding of Microsoft Word in Irak which was produced by Sarsoh, Hashem & Hendi (2012) concluded that"?to hide the secret message in original text, and retrieve the original text after the determination of hidden data obtained results between the original text and the text contains the hidden data shows that the two texts are virtually identical".

The next finding related to this research was Microsoft Excel in Dallas which was written by Elliot, Hynan, Reisch & Smith (2006) stated that Microsoft Excel "?will save researchers' time and money and result in a data set better suited to answer research questions". The next relevant research was Microsoft Power Point in United State of America which was released by Bartsch & Cobern (2003) stated that slide Power point "?can be beneficial, but material that is not pertinent to the presentation can be harmful to students' learning". The next research related to this research is Adobe Photo shop which was produced by Wexler (2012) that Adobe Photoshop "?extended adds the highest quality imaging toolset and broadest range of digital imaging cap abilities". Next, this research is related to the finding of Macromedia Flash which was produced by Sutopo (2011) that Macromedia Flash "?with Action Script, which classify into design factor, multimedia factor, and programming factor, succeeds in generating algorithm visualization".

The next finding related to this study was Quiz Creator released by Rochmah (2013)"there is a system of evaluation of the effectiveness ratio test electronic form using Wonder share quiz creator and paper test in terms of student achievement test on the material word processing application". Then, this research is related to the finding of Email in United State of America which was written by Meho (2006) stated that email"?can be in many cases a viable alternative to face-to-face and telephone interviewing". The next relevant finding was email in India which was produced by Ban day (2011) there needs"?a major educational campaign to aware e-mail users about e-mail security issues and train them in use of security protocols and procedures".

The next relevant study is Blogin Germany which was produced by Schmidt, Wilbers & Paetzolt (2006) a software Blog is "?would not only reach a refined understanding of this relatively new phenomenon, but also contribute to a better understanding of computer-mediated communication and interaction in general". Then, this study is related to the finding Blogin Australia which was written by Hook way (2008) that Blog since 1999 "?have become a significant feature of online culture and a new addition to the qualitative researcher's toolkit and some of the practical, theoretical and methodological". The next relevant study was You tube in Florida which was released by Chenail (2008) that You tube offers"?video clips introducing basic qualitative research concepts, sharing qualitative data from interviews and field observations, and presenting completed research studies". The next relevant finding was Face book in Malaysia which was written by Esteves (2012) stated that Face book"?proved to be an effective tool in enhancing the delivery of a distance education course. It was effective for teaching and enriching practical skills courses delivered online".

The use of computers in education and learning can be used to help learning more effective. Computer plays a major role in learning, because the Computer enable to assist educators in facilitating learning, even to motivate and accelerate students' learning. However there was a research related to computer assisted instruction in Nigeria produced by Imhanlahimi & Imhanlahimi (2008) From all the data either observation and interview can be concluded that Secondary School Teachers of Padang did not utilize the computer as assistant of instruction. The score from observation was 40. 53, it indicated that the competence of teachers to utilize the computer as assistant of instruction was poor. It showed that a product was needed to be presented to overcome the weaknesses of teachers in the use of Furthermore, the schools already had a Computer Laboratory; and teachers also had a laptop. This was consistent when applying a model in the form of webbased learning.

The last, researcher conducted Theory Analysis associated with CAI (Computer Assisted Instruction). CAI is the use of a computer directly to the students about the content of the lesson, provides training and testing the students' progress. CAI is the use of computer as a tool in education and teaching. CAI helps students understand the material and can repeat the material over and over until the students master the materials. According to **??**right (1983: 144-152), when compared to traditional teaching approaches, CAI is very effective and efficient. The students will learn faster, master the subject matter more and remember more of what they have learned.

In a meta an alysisKulik and Kulik (1991: 75-94) the results of research on the effectiveness of CAI for 25 years, concluded that: 1) students learn more materials from the computer; 2) students remember what they have learned through CAI longer; 3) students need a little time; 4) students feel more comfortable in the classroom; and 5) students have a positive attitude toward computer. Criswell (1989) defines CAI (Computer Assisted Instruction) means deliver instructional materials to actively engage learners and to allow feedback.

In the design phase, the researcher made a frame building concept a model in the form of webbased learning. The design was made in accordance with the results of the need analysis conducted on the sample. The design here described an overview of the work flow system. The picture was stratified, the upper level was log in and the lowest level there was the level of achievement of the respondents.

This model is also called the layered models. In **??**his Then the application will read the database to determine if the username and password that is entered is valid or not. If invalid, then the member will be asked again to enter the username and password correctly; 3. If valid, then the member will go to the member page which displays a list of video tutorials that can be done; 4. Then the member chooses to carry out the first video tutorials, and filling pretest questions are provided; 5. If the level of achievement of the respondent in accordance with the standards set value, then the passed member can continue to work on the next video;

6. If it does not pass, then the member will be required to watch the video tutorials to further advance work on the posttest; 7. If the results of posttest achievement level does not meet the standards set value, then the member is asked to watch back the video tutorial; and 8. If the level of achievement of the respondents are in accordance with the standards set value, means the member is passed and can work on the next tutorial.

In the development phase, researcher developed a model based design had been prepared and the focus was on the presentation of the materials. Then the model was given to the validator to be validated and tested in a focus group discussion The final conclusion of the validation revealed that model can be used with the revision, it got 83.20 (very good). Validation results were then tested and refined on focus group discussions which were held on 29 November 2013. Results of the focus group discussion stated that a model was very good.

In the implementation phase, researcher with schools prepared teachers in the study sample, computer experts, instructional media (computer / laptop and LCD) and set up a study room. Furthermore, researcher tested the effectiveness and practicalities of the model.

The results of t-test analysis from per secondary school and per subject teachers explained that tcoun t on a model was greater than ttable **??**39,310> 2,000) and the value of the P value was very small with acquisition values Sig. (,000) <? (0,05). It was concluded that the model was effective for Secondary Schools of Padang. Furthermore, in the implementation phase, the researcher also distributed questionnaires about the practicality of a model and the result revealed that the model was practical. It was seen from 80,9% respondents stated that the model ease them and motivate the to operate computer as assistant of instruction.

In the evaluation phase, researcher conducted an evaluation of the learning process, which was carried out to look at the harmony of the implementation of the model with the design created. Then the results of the evaluation conducted by the posttest to see the level of achievement of the respondents from the pretest and after the training by using model was given.

The results of the evaluation process of the entire secondary schools concluded that the model was implemented in accordance with the design. The results of the evaluation on the overall results indicated that a model influential and meaningful, because there was an increase in the value of the respondents before and after the training was done both persecondary schools and per subjects. The interesting thing was it turned out the teachers' evaluation of BAM better results compared with the Mathematics. This happened because the level of willingness BAM to learn more than in the Mathematics teacher.

The evaluation answered the research which were done by Sujianto, Mukhadis & Isnandar (2012). The finding concluded that continuing professional development on teacher's certified of vocational school Malang Raya "?still poor because the score was 61,Volume XIV Issue V Version I 50 (G)

99% (the teachers could not operate computer as assistant of instruction)".

IV.

4 Discussion

The findings revealed that a model was valid, practical and effective. The findings of the research related to the continuing professional development. The findings were supported by the research in United State of America which was written by Wallace (2004), he developed a frame work for teachers on teaching by using internet, He stated that "teachers are not well prepared to teach with the Internet, and its use is limited in scope and substance, the result of framework was effective". However the research in Greece which was produced by Vernadakis, Zetou, Antoniou & Kioumourtzoglou (2002) concluded that "there were no significant difference between Traditional Instruction and Computer Assisted Instruction, using Multimedia Technology as a teaching aid is as effective at teaching skills as the traditional method".

The findings of this research were supported by the research in Texas which was written by Galvis, Ishee & Schultz (2011), they concluded that "there were significant difference between instruction by using Computer Assisted Instruction and Traditional Classroom Lecture. CAI spent time 46% faster than TCL". The findings were also supported by the research which was done by Tsai (2001), he concluded" both constructivist-oriented learning theory and Internetbased instruction are relatively new approaches in teaching science. The integration of these two approaches is expected to produce better learning outcomes for students". The findings on this research were related to the finding in Tennessee which was released by Thompson & McNutt (2009) that Microsoft PowerPoint "?showed effective presentation and make effective use of visuals". The next relevant study related to this research was the finding in Canada which was produced by Schein, Wilson & Keelan (2010),

they found"?an abundance of both informal health conversations related to public health issues and organized health-related activities on leading social media platforms such as YouTube, Twitter, and Face book".

The next relevant study related to this research was the finding in Indonesia which was done by Surjono (1999) that "there were researches showed the use of computer on instruction did not maximum". The next relevant study related to this research was written by Davidson & Santorelli (2010), they found "the effect technology toward education had become research subject for years". The findings on this research were also supported by the research which was produced by Mbarika, Payton, Kvasny & Amadi (2007), they concluded that" women in Sub-Saharan Africa historically as a farmer. Nowadays, it goes to change as well as the growth of ICT on education".

The next relevant study related to this research was the finding in London, South Africa and Asia which was released by Carmichael & Honour (2002), concluded that "open source must become an alternative for commercial organization and the product in education". The findings in this paper were also supported by a study in Turkey which was written by Basturk (2005)that the "participants' learning capacity of the introductory statistics could be improved successfully when CAI used as a supplement to regular lecture in teaching introductory statistics course". The findings of the research in this paper were also supported by research in Caroline which was conducted by Jeffs, Evmenova, Warren & Rider (2005), the study revealed that computer assisted instruction is "effective complement to other activities associated with the first grade curriculum (spelling and decoding) and has potential to enhance students' reading and writing skills".

The findings of the research in this paper were further supported by the research in Malaysia and Iran which was produced by Yunus&Salehi (2012) that the group on Face book "?improved the teaching writing, it needs to carry out this study as it provides a platform to discover pedagogical implications that would benefit the Y-generation in terms of improving their writing skills". The findings in this paper were also related to the research in Turkey which was released by Acikalin (2010), he concluded that computer is "a powerful research tool which facilitates students' work and makes the work faster and easier for the students. Microsoft Power Point, Word, and Excel were the most common use of computer-supported instruction in the classrooms". The Joint Information System Committee (JISC) (2004) in London also concluded that "e-Learning improved the learning experience. It has the potential to transform the way we teach and learn across the board. It can raise standards, and widen participation in lifelong learning".

The findings in this paper then supported by the finding in Malaysia which was written by Noordin, Ahmad & Hooi (2011) that "a multimedia courseware using 3-Dimensional (3D) model for teaching a mathematical topic on Lines and Planes in 3-Dimensions showed significant improvement in attention, response and recall of the content". The findings in this paper were also supported by a study in Canbera, Australia and Cambridge which was released by Craswell, Hawking & Robertson (2001), they concluded Website "?opens a rich new area for effectiveness improvement, where traditional methods fail". The findings in this paper were also related to the finding in United State of America which was produced by Dunmire (2010) that the educators"?must factor into the adoption analysis, the ease of use of the technology.

The findings of this research were then supported by the research in Pakistan which was released by Kausar, Choudhry&Gujjar (2008),they found that Computer-Assisted Instruction"?as an effective teaching method should be applied to improve teaching quality and by using CAI it will be possible to eliminate lingual, regional and ethical biases between teacher and student". The findings of the research were also related to the research in Lincoln which was produced by Scheckelhoff, Swarlis & Murakami (2010) that the teenagers must be prepared to love tekhnologywhen"1) they have regular and predictable access to technology, 2) there is social connectedness with technology, 3) spatial ability is developed beginning in their early years of education, and 4) they have skill".

The next relevant study was in South Africa which was written by Alant & Dada (2005), they found that "students felt they gained greatly from the course and that the web-based teaching methodology facilitated their learning in various ways". Next, the findings were related to the research in South Africa which was produced by Fresen & Boyd (2005), they found that web based learning"?used in conjunction with measurements to inform the cycle of continuous improvement and to provide management information". The last, the findings were relevant with the research in New York which was launched by The Association of Business Information & Media Companies (2013) that "while digital marketing tools abound, email remains one of the most prominent, effective and personal marketing platforms we have for reaching our customers".

V.

5 Conclusion

This study concluded that (1) Secondary School teachers of Padang were not utilizing the computer as assistant of instruction. The score from observation was 40.53, it indicated that the competence of teachers to utilize the computer as assistant of instruction was poor;

(2) the results of the development concluded that a model was valid, practical and effective. The validation score was 83.20 (very good). The model was practical, it was seen from 80, 9% respondents stated that the model ease them and motivate the to operate computer as assistant of instruction. The was also effective, it was seen from the results of t-test analysis from per secondary school and per subject teachers explained that tcount on a model was greater than ttable (39,310> 2,000)and the value of the P value was very small with acquisition values Sig. (,000) <? (0,05).

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Figure 1: Findingsa)

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Score of Teachers' Competency Test

Level	Highest Score	Lowest Score	Average
Kindergarten	80	1.0	44
Elementary School	83	1.0	40
High School	78	1.0	36
Secondary School (Subject: Mathematics)	88	1.0	51
Secondary School (Subject: English)	92.86	7.14	45
Secondary School (Subject: Sport)	86.67	13.33	6
Secondary School (Subject: BAM)	88	2.0	51

Figure 2:

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Assistant of Instruction

School	Score	Criteria
Secondary School 1	70,00	Good
Secondary School 8	56,25	Fair
Secondary School 31	49,38	Fair
Secondary School 34	49,38	Fair
Secondary School 17	36,25	Poor
Secondary School 33	32,19	Poor

From the observation that the average ability of teachers of Public Secondary School 1 Padang in using the computer as assistant of instruction was poor. The result is explained on the table below.

Figure 3: Table 3 :

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No.	Teachers' Competence	Achievement	Criteria
1	Utilize computer as assistant of instruction	43.33	Fair
2	RunsoftwarePowerPoint	45.83	Fair
3	Use LCD in instruction	42.50	Fair
4	RunMicrosoftExcelto calculate students' score	59.17	Fair
5	UseEmailto collect students' assignment	31,67	Poor
6	Make animation to produce an instruction fun	44.17	Fair
7	Publish materials on line	34.17	Poor

[Note: © 2014 Global Journals Inc. (US) A Model for Upgrading Teachers' Competence on Operating Computer as Assistant of Instruction]

Figure 4: Table 4 :

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teachers' continuous training and the use of modern technology devices do not only help boost country's manpower but also invigorate the country's economy to compete well in this challenging world of the globalization". Then, this research is related to the finding in Turkey which was produced by Basoz & Cubukcu (2014) that recently the computer assisted instruction"?has come to the forefront of language learning and teaching". Next, this research is related to the lately finding in India which was released by Chaudari (2013) that the computer assisted instruction"?a supplementary instructional strategy in effective teaching".

Figure 5: Table 2 :

Figure 6:

room. Implementation of this model used quasi-experimental design that used pretest and test the ability of the end (posttest) to determine the mean score performance (gain score) of learning outcomes by using A Model for Ugrading Teacher's Competence on Operating Computer as Assistant of Instruction.

5. Evaluation, in this phase the researcher conducted an evaluation of the model. Evaluation was done in each phases to see the relation between the design and analysis, design and development and the development and the application. Evaluation was done to tell what was happening and what had happened. Evaluation was done twice, there were formative evaluation and summative

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No.	School Secondary	Percentage Needs	Criteria
1	1	85.36%	Very Need
2	8	83.93%	Very Need
3	31	94.17%	Very Need
4	34	96.76%	Very Need
5	17	94.61%	Very Need
6	33	91.55%	Very Need

Tabel 2 : Summary of Teachers' Responses Per Subjects toward Model

No.	Teachers' Subject	Percentage Needs	Criteria
1	Mathematics	90.02%	Very Need
2	English	92.75%	Very Need
3	BAM	91.42%	Very Need
4	Sport	90.02%	Very Need

Furthermore, researcher conducted a Contextual Analysis where the model was applied. The model applied in Public Secondary School 1, 8, 31, 34, 17 and 33 of which were already using the Wireless Local Area Network (WLAN) or Wi-Fi (Wireless Fidelity).

Figure 8: Table 1 :

2007; Microsoft Power point 2007; Adobe Photoshop					Blogging; Face book; and You tube Downloading.
CS 3; Macromedia Flash 8; Quiz Creator; Email;					
1	1. 2 Microsoft Word 2007	Microsoft Excel 2007	1. 3 Microsoft Powerpoint 2007	1. Teachers are able to access Microsoft Po 2. Teachers are able to usethe toolbar on Microsoft Powerpoint 2007; and 3. Teachers are able to create slide for presentation related to the example given.	
4	Adobe Photoshop CS 3			1. Teachers are able to access Adobe Photoshop; 2. Teachers are able to create picture and wallpaper on the new blank; and 3. Teachers are able to give the effect on	
5	Macromedia Flash 8			1. Teachers are able to access Macromedia Flash 8; 2. Teachers are able to use the toolbar on Macromedia Flash 8; and 3. Teachers are able to create a simple animation.	
6	1. 8 Quiz Creator	Blogging		1. Teachers are able to access Blogger; 2. Teachers are able to enroll for making personal blog; and 3. Teachers are able to post materials on blog.	
9	Facebook			1. Teachers are able to access Facebook; 2. Teachers are able to enroll and create an account on Facebook; and 3. Teachers are able to create group for instruction.	
10	Youtube Downloading			1. Teachers are able to accessYoutube; 2. Teachers are able to use the navigation on youtube; and 3. Teachers are able to searchinstructional video and download it.	
					. A model developed in accordance with the design principles of competence expected in the materials were designed such Microsoft Word 2007; Microsoft Excel

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