

The Accomplishment of the Designing of Course of Digital Content Development Training for Non-IT and Various Experiences Teachers

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Abstract. Digital content is new media that is effect to learning. While, it is difficult to create media because of ICT tools are required. The objectives of this study are, to design the digital content creation training course for Thai language teachers who have a very different profession experience, IT experience, to evaluation the result after training. The questionnaire and test are used for data collection from 56 trainees who come from 17 schools from all over Khonkean province. Descriptive statistics, compare means and post hoc testing were used in data analysis and interpret. We found that the project-based training course makes the different participant gained same knowledge, and attitude to use the digital content for their teaching is not different. However, the IT experience still makes a individual differences.

Keywords: Training Course, Project-Based Training, Digital Content Creation.

1. Introduction and Background

Thai language is the national language of Thailand which presents the civilization and culture as well. The basic of role of all languages around the world is used to communication, the tool for studying, and the tool for understanding country's identity. Likewise, Department of Thai language Hat Yai College (Thailand) mentions the roles of Thai language that consists of communication, studying, recording and transferring literature, national identity and unity [1]. And, the most important character of Thai is melodic language that makes it different from other language. Normally Thai language is dialect in Thailand, and then everyone in the nation can use to communication by themselves. However, Thai language teachers are necessary to teach students to communication, and moreover, they must teach the skill of reading, writing, listening, and speaking in Thai [2].

The roles of Thai language teacher in the context of Thailand and conceptual roles such as, firstly, make student understand very well in listening, speaking, reading and writing skill, and secondly, make student known Thai literatures and good story both local and nation. It can be seen that in addition of teaching, then the Thai language teacher should play the role as conservator and promoter of Thai cultures as well [3]. Nowadays, Thailand is experiencing several problem issues in teachers. The first problem is the lacking of teacher. As in the report of state of shortage of teachers in the basic education level [4] mentioned that in Thailand, there are 396,507 teachers, but teachers need to be able to handle up to 478,186 teaching effectively. The second is, instruction is outdated that is a result of profession of Thai language teacher is normally no IT experience. While ICT technology is rapid change, the new media and new teaching tools come to classroom and take action as the important role in teaching process. For this reason, teachers must develop their own ICT knowledge [5, 6]. Then, the ways to solving given problems are developing exist teachers can use of ICT for effective teaching.

Training is a process that enhanced the personal skill, knowledge and technical ability of the job including of creating new behaviour. There are a lot of technique or model of training. Then, choosing the right approach should be considered the goal, trainee and context of training. Training to making of understands the job or profession, training by brainstorming and practicing is possible method [7].

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Cooperation Learning is one of the effective training methods for understanding of knowledge [8]. Imagine, Brainstorming, Creating, Presenting, Assessing Model is called IBCPA training model that is appropriate training model to knowledge and skill of creative works [9]. While, the goal of skill and knowledge developing in ICT, mixed training method that is combination between training in the lab and online with digital media, is the one of training method can build capacity of trainee [10]. In addition, we also consider about the age of [11], level of training course [12] and content of training course [6].

Khonkean Provincial Administrative Organization (KKPAO.) is the local organization that development the well-being within the province including of education system. Therefore, the teachers who are under the control of KKPAO should be developed especially Thai language teacher because of their responses are teaching the student to read and write in Thai as well. Then, the digital content creation training project is established under the need to Thai language teacher can make their instruction media, called ICT media.

2. Purpose and Hypothesis

According to above problem, this study was conducted with the aims consist of (1) to design the appropriately training course of digital content development for Thai language teacher, (2) to train the teacher with designed course, and (3) to evaluate the result of training.

The research hypothesizes are (1) the course is well-designed to support non-IT and various experience make the trainee gain the same level of knowledge and (2) make the same attitude of useful of digital content to Thai language learning of students.

3. Research Methodology

This study consists of 3 main processes as illustrated below

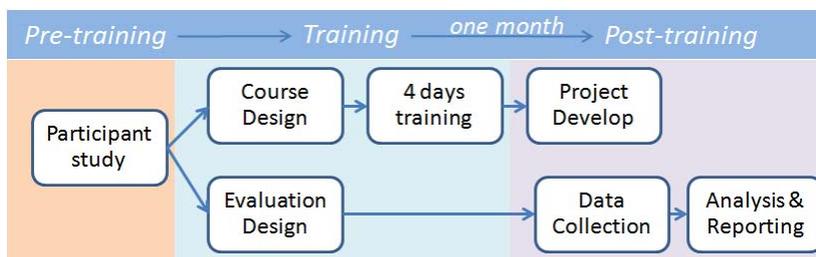


Fig. 1: The 3 main processes.

3.1. Participants

The participant of this study is 56 Thai language teachers who are under the KKPAO. They come from 17 schools including of both primary and secondary school. The first process of this project is studying of participants to collect the individual information such as experience in IT, courseware or e-learning or digital content creation and teaching with data collection form as in appendix part I, called Pre-training.

3.2. The Instruments

There are 2 instruments which were used in this studying consist of the training course and the test. To create and use the research instruments as shown below;

3.2.1 Training Course

The course was designed to support the difference of teacher experiences. Therefore, designed course is project-based training by requiring the participants prepare their project material and build own project by step by step. With a lot of difference of trainees, therefore, we need to consider about level of education, experience of teaching, experience of IT knowledge and experience in e-learning creation. The final course is 4 days training of digital content creation with Adobe Captivate. Table 1 show the designed course.

Table 1: The design of course

Activity	Detail	Percentage (%)
Lecture	Trainer lecture in the topic of multimedia, courseware, the process and technique of multimedia creation, introduction to factors effect to design the digital content for disability reading and writing in Thai language and application of multimedia on mobile device	20
Demonstrate	Trainer demonstrate the method of digital content with Adobe Captivate emphasis on software installation, set up, and step by step of using software to create and publish digital content	20
Operate	Trainer and assistant of trainer takes care all trainees to be able to do the same as demonstrate. The laboratory is providing enough computers for all participants	50
Develop project prototype	The trainee presents their own interested project to the team of trainer. And in the period of training, the trainees do the project prototype under advice of trainer team	10

4. The Questionnaires

Likewise, in the process of training, the evaluation form was made in the form of query. There are 2 tests which consist of test of knowledge and attitude of digital content usage. Both of them are in the form of rating scale. For the test of knowledge, it is 3 choices of answer that including of right, wrong, and not sure. While, the questionnaire, there are 6 levels of agreement including of the most agreement, more agreement, averagely agreement, less agreement, least agreement and disagreement. The question lists are shown in appendix I and II.

4.1. Data Collection

After the duration of training ended, all of trainees must do their final project within one month. The process of data collection begins after one month passed. For this process, the test and questionnaire were used. For the test, the answer will be marked with the sign in box and if the answer is right, the trainee should respond. The reason is because the test wants to re-check of actual knowledge of the trainee.

4.2. Data Analysis

For the test and questionnaire, we translate the scale of answer to be the score; score of 3, 2, and 1 respectively for the test and score of 6, 5, 4, 3, 2, and 1 respectively for the attitude questionnaire. There are 2 steps of data analysis; firstly, descriptive statistics are used with basic information of trainees for count the number, frequency and cross tabulation. Secondly, the test and questionnaire are analyzed with mean, standard deviation, compare mean by t-test and F test and post-hoc tests by LSD., and Dunnett's T3.

5. Finding

The finding of research will be presented the following topics.

5.1. Basic Information of Trainee

This information is summarized from the questionnaire that use for data gathering in the pre-training. Starting from the basic data of the trainee, we found that 80.4 percent graduated with a bachelor's degree and the leaving is graduate degree. Responsible for teaching the class; pathomsuksa 1-3 as 8.9 percent, pathomsuksa 4-6 as 12.5 percent, matthayomsuksa 1-3 as 41.1 percent and the rest as 37.5 percent teaches matthayomsuksa 4-6. Moreover, the most of the trainees is less than 5 years teaching experienced at 64.3 percent, secondary is teaching experience between 16-20 years as 14.3 percent and 6-10 years, 11-15 years, and more than 20 years of experience respectively. Next two tables illustrated the experience of IT and digital content making.

Table 2: The level of IT experience of the trainees

List of experience	Level of knowledge and skill							
	Good		Average		Less		None	
	#	%	#	%	#	%	#	%
IT-Exp.1: Computer hardware and its system	14	25.0	34	60.7	8	14.3		
IT-Exp.2: Application usage	9	16.1	31	55.4	12	21.4	4	7.1
IT-Exp.3: Internet and information searching	24	42.9	27	48.2	5	8.9		
IT-Exp.4: Basic solving of using of the computer (troubleshooting)	11	19.6	29	51.8	13	23.2	3	5.4

Table 3: The detail of experience of digital content creation

Category	List	Experience of digital content creation							
		DCC.0		DCC.1		DCC.2		DCC.3	
		#	%	#	%	#	%	#	%
1) Level of study	Bachelor degree	13	23.2	17	30.4	12	21.4	3	5.4
	Graduate degree	3	5.4	5	8.9	3	5.4		
2) Level of teaching	Pathomsuksa 1-3	1	1.8	2	3.6	2	3.6		
	Pathomsuksa 4-6	1	1.8	2	3.6	3	5.4	1	1.8
	Matthayomsuksa 1-3	8	14.3	10	17.9	5	8.9		
	Matthayomsuksa 4-6	6	10.7	8	14.3	5	8.9	2	3.6
3) Teaching experience	Less than 5 years	9	16.1	14	25.0	11	19.6		
	6-10 years	2	3.6	2	3.6	2	3.6		
	11-15 years	1	1.8	3	5.4				
	16-20 years	2	3.6	3	5.4	2	3.6	1	1.8
	More than 20 years	2	3.6						
Total		16	28.6	22	39.3	15	26.8	3	5.4

Table 2 shows the participants have difference of IT experience. And, the large number of them is level of average. However, a few of them is none of IT-Exp.2 and IT-Exp.4. When we cross tabulation with data of level of study and teaching experience, we found that the trainees who have none experience is bachelor graduated and at less than 5 years of teaching experience. According to table 3, DCC.0 means no experience on digital content creation, DCC.1 means the trainees have experience on Microsoft Power Point, DCC.2 means they have experience on e-book maker, and DCC.3 means they have experience on authoring software package. Table 3 shows the difference of participants on digital content creation. We found that the maximum of number of participants are low experience and only 5.4 percent of trainee was used to make digital media for example Macromedia Flash.

5.2. The Difference of Participants and Gained Knowledge

The testing of the difference between groups of participants, we found that participant who have difference of level of education, experience of teaching, and experience in digital content creation are gained the knowledge from this training be not different with statistical significant at level 0.05. The following table shows the comparison of gained knowledge and difference experience of IT-Exp.1 – IT-Exp.4.

According to Table 4, we found that after follow-up test, the trainees who have the difference of IT-Exp.1 gained knowledge in the same score, but while, trainees who difference of level of IT-Exp.2, IT-Exp.3 and IT-Exp.4 gained means score of knowledge from this training are different with the statistical significance level at 0.05. Afterwards, we checked the difference of the between group with post hoc test; LSD, and Dunnet's T3, with the statistical significance level at 0.05. We found that;

- The trainees who are in the good and the average level of IT-Exp.2 gained means score of knowledge higher than who are in the less and none level of IT-Exp.2
- The trainees who are in the good level of IT-Exp.3 gained means score of knowledge higher than who are in the average and the less level of IT-Exp.3, while, the trainees who are in the average level of IT-Exp.3 gained means score of knowledge higher than who are in the less level of IT-Exp.3

- The trainees who are in the good and the average level of IT-Exp.4 gained means score of knowledge higher than who are in the less and none level of IT-Exp.4.

Table 4: The comparison of gained knowledge and difference of IT experiences

Comparison List	Statistic	Sum of Square	df.	Mean Square	F test	
					F	Sig. (2-tailed)
Gained knowledge * IT-Exp.1	Between group	43.36	3	21.68	2.60	0.084
	Within group	442.35	52	8.53		
	Total	485.71	55			
Gained knowledge * IT-Exp.2	Between group	99.95	3	33.32	4.49	0.007*
	Within group	385.76	52	7.42		
	Total	485.71	55			
Gained knowledge * IT-Exp.3	Between group	138.96	3	69.48	10.62	0.000*
	Within group	346.76	52	6.54		
	Total	485.71	55			
Gained knowledge * IT-Exp.4	Between group	124.78	3	41.59	5.99	0.001*
	Within group	360.93	52	6.94		
	Total	485.71	55			

5.3. The Difference of Participants and Digital Content Usage Attitude

After we analyzed the participant's attitude to using digital content in classroom, we found that the trainees who have the difference in level of education, experience of teaching, and experience in digital content creation are same level of attitude with statistical significant at level 0.05. Likewise, the trainees who have the difference in level of IT-Exp.1, IT-Exp.2, and IT-Exp.4 are same level of attitude. But IT-Exp.3 resulted in the opposite as shown in Table 5. The Table 5 shows the trainees who difference of level of IT-Exp.3 are different about usage attitude with the statistical significance level at 0.05. Afterwards, we checked the difference of the between group with post hoc test with LSD, at the statistical significance level at 0.05. We found that the trainees who are in the good and the average level of IT-Exp.3 had means score of attitude higher than who are in the less and none level of IT-Exp.3.

Table 5: The comparison of attitude and IT-Exp.3

Comparison List	Statistic	Sum of Square	df.	Mean Square	F test	
					F	Sig. (2-tailed)
Usage attitude * IT-Exp.3	Between group	726.20	3	363.10	7.17	0.002*
	Within group	2684.93	52	50.66		
	Total	3411.13	55			

6. Conclusion and Discussion

This training course is designed on the basis of the difference of age, level of education, level of class response, level of IT experiences and level of experience in digital content making. We found that there are a lot of differences within the group of participant; however, the designed course must be served all of them, then project-based training was proposed in this training. The result of this research exposed that only the difference of IT experience effect to knowledge gained and attitude of participants after treat. In addition, we found that the trainee who is differences of internet and information searching skill effected to knowledge and attitude. Further, the retention and creative production after treat of the training are interesting.

7. Acknowledgements

This training project is funded by Khonkean Provincial Administrative Organization. Thank you very much to the coordinator Mrs. Sirikul Tabchay, Educational Supervisor. Thank you to the trainer team, Assoc. Prof. Sanit Kayaphad, Mrs. Sisporn Noi-umka. Thanks to all of the training participants who are Thai language teacher from 17 schools around Khonkean Province.

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9. Appendix

This part shows the example of the list of test and questionnaire which used to collection the data.

Appendix I Knowledge Testing

Test list	Answer		
	Right	Wrong	Not sure
<u>Instrument media and students</u>			
1) media to help solve the problem of differences between individuals in learning			
2) media makes the freedom of direction and speed control by student			
3) media opportunities for students to participate in lessons with various of interaction			
4) media is motivating to the student			
5) media allows learning to occur efficiently and with better results			
<u>The development of Instrument media</u>			
6) Software provides tools for make understanding by texts and medias			
7) Software provides tools for create the direction controls			
8) Software provides tools for feedback information to students			
9) Software provides tools for insert animation, audio-visual media			
10) Software provides tools for tools make the test and questionnaire			

Appendix II Attitude Questionnaire of Usage Digital Content

Questionnaire Lists	Level of Agreement					DisagreeN ot sure
	Most	More	Averag	Less	Least	
<u>The benefits of media for students</u>						
1) Media makes students fluently read and write Thai, and independent learning						
2) Media can help motivate students to fluently read and write Thai						
3) Media with audio-vision makes students enjoy to learn						
4) Media can instead be taught in the classroom						
5) Media improve student achievement of learning of reading and writing in Thai						
<u>The benefits of the software to the media</u>						
6) Software can create media which is more improved than classroom teaching						
7) Software can create media which is freedom to student						
8) Software can create media which is easy to use						
9) Software can create media which is encourage learning of student by image, sound, animation						
10) Software can create media which is stimulate student's memory						