

A Study of the Utilization and Selection of Instructional Media form Elementary Teachers in the Learning Area of Social Studies, Religion, and Culture*

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Abstract

The purposes of this research are to study the selection and utilization of instructional media for teachers in the Learning Area of Social Studies, Religion, and Culture, and to cluster the group of teachers in the utilization and the selection of instructional media. The participants in this study were 395 elementary teachers in Social Religion and Culture Studies Department in Thailand. Questionnaires and semi-structure interview were employed as research instruments. The data was analyzed by using percentage, while clustering data were completed by using data mining program in K-Means technique and the interview results were then described from the descriptive analysis. The research shows the different groups of teachers used different types of instructional media including non-projected material, projected and equipment, instructional media, and multimedia. The results revealed that all instructional media excepted multimedia were utilized. Multimedia was rarely selected and utilized because of the complex process. Finally, all four types of data clustering were classified based on gender, teaching in grade, the experience of teaching, academic teachers, knowledge of instructional media and regions. These factors affect the different selection and utilization of instructional media.

Keywords: Utilization Instructional Media; Selection Instructional Media

Introduction

Instructional media are regarded as one of the problems affecting the instructional management failure of elementary teachers in the learning area of Social Studies, Religion and Culture. From past studies of instructional management in Social Studies, Religion and Culture, Amarasevi (2017), Kaewla (2016) and Vannako (2012) pointed out that the most crucial problem of instructional media is out-of-date to the changes of modern events or situations, because most instructional media containing pictures from magazines, news, or current events are mass produced and inflexible over the changes. Moreover, theory-oriented and chalk-and-talk teaching methods are lackluster and inadequate to be used for social studies, religion and culture classes. Regarding the study of Chobthamdee (2015) on instructional media problems of pre-service teachers, the result revealed that the participant teachers in social science study gained moderate to low level of knowledge and understanding of instructional media utilization and selection. Consequently, they cannot decide to choose suitable instructional media. The sample groups suggested that online training, suggestion, and teaching supervision on instructional media utilization and selection should be provided, and they required adequate up-to-date and easy-to-use instructional media. However, this study result was based on a small sample size from a few schools and universities in Ayutthaya province which is difficult to generalize to a national level. In addition, specific instructional media classification should be conducted. From previous studies, instructional media can be categorized into four groups: (1) non-projected materials, (2) projected media, (3) multimedia, and (4) instructional technology (Edgar Dale, 1969; Malithong, 2005; Ministry of Education, 2002; Ratsameeprom, 1990). If instructional media classification is methodically carried out throughout Thailand, it will be a convenience to distinguish characteristics and problems arise from selection utilization of each instructional media type. Subsequently, the instructional media grouping results are employed to categorize instructor types in order to find out the appropriate solution to develop instructors in the utilization and selection of instructional media.

The purpose of this study is to determine and to cluster the selection and utilization of instructional media from elementary teachers in the learning area of

Social Studies, Religion, and Culture. The data were analyzed and grouped the selection and utilization of instructional media. The results of the study can be used as a guideline for the planning and the development of instructional media for teachers in the future.

Research Methodology

The purpose of this study is to determine and cluster the selection and utilization of instructional media from elementary teachers in the learning area of social studies, religion, and culture by using mixed methods research consisted of a survey and semi-structure interview was used in this study.

Samples were selected from 35,052 elementary teachers in the learning area of Social Studies, Religion and Culture from the schools under the jurisdiction of the Primary Educational Service Area in Thailand. The sample size calculated from Taro Yamane program (Yamane, 1973) was randomly selected. Therefore, the sample consisted of 395 elementary teachers and 8 elementary teachers from the sample group was randomly selected for the interview. All of the participants were the representative from four regions of Thailand (the North, the South, the Central, and the North-East).

The questionnaire and semi-structure interview in this study adopted from Sangpan (2009), Kerdtip (1995) and Sangsri (1993) included 2 main sections; general information and utilization and selection instructional media including non-projected material, projected and equipment, multimedia, and instructional technology. The content validity was done by two experts in educational technology and one expert in Social Studies.

Data analysis consisted of percentage from the questionnaire, the descriptive analysis of the interview, and clustering data from K-Means technique. K-Means technique, which is a popular method for data classification, is applied in this study. It could group quantitative data by using an average of a sample group. It is more precise and effective in details than using other statistic techniques in reducing the size of data by losing fewer details (Laokietkul, 2016). K-Means can select the most

important detail which can be representative of general data. This technique is generally used in business, trading, and public relations. K-Means, moreover, groups all data, clearly classifies and distinguishes the most important data (Suh C. S., 2012).

Results

The results of instructional media utilization and selection of elementary teachers in the learning area of social studies, religion, and culture revealed as follows:

Table 1: General information

	General information	Percentage
Gender	Male	34.64
	Female	65.36
Teaching in Grade	Grade 4	30.73
	Grade 5	29.61
	Grade 6	39.66
Experience of Teaching	1-5 Years	31.28
	6-10 Years	22.07
	11-15 Years	17.59
	16-20 Years	13.97
	21-25 Years	8.95
	more than 30 Years	1.39
Academic teacher	Assistant teachers	22.90
	Professional level teachers	37.71
	Senior professional level teachers	25.70
	Expert level teachers	5.31
	Contract teachers and	8.38
	Government employees	

Table 1: General information

	General information	Percentage
Educational backgrounds	Bachelor degree	83.52
	Master degree	16.48
Knowledge of instructional media	Self-study	62.85
	Training	54.19
	Self-study and Training	56.08

Regarding basic information of teachers, most participants were female (65.36%) and appointed to teach in grade 6th (39.66%) and gaining teaching experience for 1-5 years (31.28%). They were professional level teachers (37.71%) gaining a bachelor degree (83.52 %). and 62.85% got knowledge of instructional media by self-study.

Table 2: Utilization & Selection of instructional media

Type of instructional media	Instructional Media	Percentage
Non-projected material	Flat cards	56.15
	Photos, Cartoons, Paintings	58.94
	Charts, Diagrams, Statistic plans, Graph	28.21
	Globes	57.79
	Maps	80.72
Projected and equipment	Visualizers	50.55
	Projectors	56.42
	Computers	54.19
	Smart boards	12.78
Multimedia	Computer-assisted instruction	29.01
	Multimedia instruction	19.27
	Electronic learning	10.05
	Video	20.12

Table 2: Utilization & Selection of instructional media

Type of instructional media	Instructional Media	Percentage
Instructional technology	Google Earth	50.55
	Google Map	34.12
	Google Street View	21.96
	PowerPoint	60.33
	Internet	51.95

Table 2 shows the utilization & selection of instructional media. In non-projected material, teachers selected map followed by photos, cartoons and paintings, and globes. In projected and equipment, projectors, computers, visualizers and smart boards were selected. In multimedia, computer-assisted instruction, video, multimedia instruction, and electronic learning were utilized. The highest selection in instructional technology was PowerPoint, Internet, and Google Earth.

Table 3: Clustering of Utilization & Selection of instructional media

General information	Region Clustering			
	South	North	Central	North-east
Gender	Male	Female	Female	Male
Teaching in Grade	Grade 5	Grade 6	Grade 4	Grade 6
Experience of Teaching	11-15 Years	1-5 Years	16-20 Years	6-10 Years
Academic teacher	Professional level teacher	Professional level teacher	Senior professional level teachers	Senior professional level teachers
Educational backgrounds	Bachelor	Bachelor	Bachelor	Bachelor
Knowledge of instructional media	Self-Study	Training	Self-Study	Self-Study
Utilization & Selection				
1. Non-projected material	Select	No Select	Select	Select
2. Projected and equipment	Select	Select	No Select	No Select
3. Instructional technology	Select	Select	No Select	No Select
4. Multimedia	No Select	No Select	No Select	No Select

K- Mean analysis was used to analyze the data and the results show the majority of the survey group in utilization and selection of instructional media. The clustering from the teachers in the South consisted of the male professional teacher, gaining bachelor degree, teaching grade 5, gaining experience of teaching 10-15 years and gaining instructional media knowledge from their self-study. They selected all of the instructional media except multimedia.

In addition, the clustering teachers from the North of Thailand was female professional level teachers gaining bachelor degree. Most of them taught grade 6 and gain experience of teaching 1-5 years and gained instructional media knowledge from training courses. They only selected Projected and equipment.

In the central of Thailand, the teachers were female senior professional level teachers, teaching grade 4, 16-20 years experiences in teaching, gaining bachelor degree and gaining knowledge of instructional media by self-study. They selected Non-projected material.

In the North-East of Thailand, male professional level teachers teaching in grade 6 gaining bachelor degree and gaining knowledge of instructional media by self-study selected non-projected material.

The table shows the clustering of utilization and selection of instructional media. The findings show that the most utilization of instructional media is Non-projected material follows by Projected and equipment and Instructional technology, respectively.

Interview

The results from the interview reveal that the teachers in the South of Thailand were assigned to participate in instructional media training courses for the first five years of their teaching, so they could gain knowledge how to utilize and select instructional media to suit their content. Furthermore, the teachers could apply the knowledge gained for other media; however, they could not apply their knowledge effectively because of the rapid change of technology.

The participants from the North of Thailand selected both projected and equipment and instructional technology because they had a little work experience and they had been assigned to join training courses so they could utilize that media well. In addition, the teachers could make various kinds of instructional media after training. Furthermore, they used to utilize projected and equipment when they were pre-service teachers so they were applied these media such as pictures, text, animation, and sound at the same time while teaching.

The teachers from the Central of Thailand selected non-projected material because they were skillful in utilizing various kinds of instructional media. They agreed that some media such as flash cards, photos, cartoons, and maps were easy to produce and they have used them for a long time. Moreover, these instructional media could be utilized everywhere and no need to surf the internet, or using computers. As a result, the teachers thought that non-projected material could be replaced by the other media.

The teachers in the North-east mostly used non-projected because this material could be easily to produce. It was suitable for self-study and convenient to carry everywhere. It could be simply repaired and the equipment was easily found. In addition, North-east teachers did not select projected and equipment, multimedia, and instructional media because their schools did not have enough media, therefore, they had to produce media by themselves. However, the teachers mentioned that they still need to use more instructional media. At present, the government provided a budget for training teachers in selecting and utilizing instructional media, therefore it was a good chance to serve their needs.

On the other hand, the teachers from all regions did not select multimedia because of the complex production process. Furthermore, multimedia from the internet was not adequate and some website asked for the copyright or payment for their access permission which was the reason for less selection multimedia.

In addition, the results from the interview also revealed that experience was the most important factor in selecting and utilizing instructional media. Even though there was no instructional media, good teaching technique, and skillful experiences leading teachers to be successful in their teaching.

The participants also suggested that related organization should gather the utilization of instructional media from skillful teachers such as model teachers through a website or in the video database. The detail in the video should consist of demonstration in teaching methods, their teaching techniques, their instructional media selection, and all their fruitful and productive techniques. They also mentioned that they wanted to watch other websites like Teacher TV which presented about professional teachers in their teaching and most teachers received awards. They pointed out that teaching theory might not be applied in a real situation but it depended on their own teaching method and techniques. Therefore, the demonstration in teaching on related websites should be continuously conducted in order to provide their teaching for teachers who were interested in teaching techniques.

In developing a learning resources center, the related organization should establish learning centers in every province of Thailand. In addition, the instructional media produced by universities should be collected in the center as it would be convenient for all teachers to retrieve and applied media for their teaching. Besides, it is beneficial for universities in the role of community services. Instructional media training course should be conducted in various types of media and the teachers can apply after finishing training. Production process should not be too difficult to do, and it can be used in real life situation. In addition, online media training course on How to select and Utilize Instructional Media and Teaching Technique should be done. Therefore, teachers can apply and manage their class learning effectively.

Conclusion and Discussion

The purpose of this study is to determine and to cluster the selection and utilization of instructional media from elementary teachers in the learning area of Social Studies, Religion, and Culture. The results revealed that most teachers from all regions gained knowledge of instructional media by self-study except the teachers in the North of Thailand. According to the interview, they said that their school directors assigned and supported them to participate in training. As the result, they could apply varieties of instructional media while teaching. Furthermore, the teachers from the North and the South of Thailand selected various kinds of instructional media because

their school directors supported them to join training programs. Comparing between the selection of instructional media, the 11-15 year- experienced teachers in the South of Thailand selected three types of instructional media except for multimedia, whereas, the 16-20 year experienced teachers in the Central of Thailand only selected Non-projected material. It could be noticed that work experience from both groups is quite similar, but the teachers from the South used instructional media more than the teachers from the Central. The teachers from the South claimed that their school directors supported them to participate in any course they were interested in. According to the results from the interview, it could be implied that the policy from school directors might play an important role to support the teachers' utilization of instructional media.

On the other hand, the teachers from the Central chose Non-projected material because it could be transferred the content to the students directly, and it was more convenient, easier to make, and no need to use the electricity. Furthermore, general information could be covered the content of the subject but it was not focused on deep detail. These media were clearly and correctly communicated (Siripatara, 2014).

In addition, the non-projected material was not only selected because teachers could produce and make their own instructional media by themselves, but the teachers also prefer to use a cost-free program such as PowerPoint which was already installed in the computer. It could be said that it was convenient for doing learning activities; however, multimedia was rarely used in learning activity because of complex production.

Implications and Recommendations

Based on the finding of the study, the results could be used as a guideline for planning and training of instructional media in order to match the teachers' qualifications of each group. This study shows the utilization of instructional media from different groups of teachers so the suggestions are made. First, the results from the interview implied that the teachers faced some problems in using multimedia because of a complex process; therefore, the study of multimedia problems and its development should be conducted to solve this problem. Second, this study focused

on the utilization of instructional media from the teachers but the satisfaction of the students and the proficiency in using the instructional media from the teachers should be concerned. Third, the finding from the study shows that instructional media training could motivate teachers to use various media; therefore, the policy from school directors should support the teachers about instructional media utilization. Fourth, the results of this study show the general information to cluster teachers, whereas factors affecting instructional media utilization should be conducted. Fifth, more research and the related topic of VDO database should be conducted (teaching technique, how to select instructional media, and the demonstration from master teachers' teaching styles). The participants from the study suggested that learning resources center should be established through research and developed process in every province in Thailand and the development of instructional media cooperation among schools, communities, and universities should be instituted.

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