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UDOMPORN THUNGKASIRI: THE EFFECTIVENESS OF COMPUTER MULTIMEDIA PROGRAM FOR ECOTOURISM OF CAVE. THESIS ADVISORS: SITTIPONG DILOKWANICH Ph.D., KASEM KULPRADIT M.Sc., SUTTINANT NANTACHIT M.S. 96 P. ISBN 974-664-885-3

Nam Khong and Nam Lang catchments contain some of the most impressive and significant caves in Southeast Asia. However, current activities in the caves are threatening their integrity. All of the caves in the region are of scientific, aesthetic, recreational, educational and economic importance, but are also extremely vulnerable to damage that maybe caused by people visiting these natural sites. Tham Lod is one of the caves in this catchment .

The main objective of this research was to develop and evaluate the effectiveness of a computer multimedia program as a means of providing information about cavernous eco-tourism. A case study at Tham Lod, Amphoe Pangmapha, Mae Hong Son Province, was used to inform the tourists about the cave geological and archeological environment as well as giving information about the local community living around the natural sites.

Research procedure started with primary and secondary data collection. Then all data were analyzed in order to create three components of multimedia program: flow chart, script, and storyboard. When these components were completed, the multimedia program named "Tham Lod" was constructed by package software of Macromedia Director. The Tham Lod multimedia program took 450 megabytes of data storage, which consisted of 4 sub headings in its content. This program also comprised photographs, animation, sound background, speech and video clip, which were recorded into a CD-ROM. Moreover, it can be used on other computers without Macromedia Director installation.

Effectiveness of the multimedia program was evaluated by a population sample and subject experts. The outcomes of the population sample were analyzed by using ANOVA test method. The results showed that, average score of the experimental groups, both tourists and high school students, was higher than those of the control groups at 0.01 significance level. The subject experts also agreed that the multimedia program was satisfactory. However, sound background should be improved.