Nutteerat Pheeraphan 2011: A Synthesis of Research on Online Learning in Thailand's Higher Education. Doctor of Education (Educational Technology), Major Field: Educational Technology, Department of Education. Thesis Advisor: Associate Professor Narong Sompong, Ph.D. 240 pages.

The objectives of this research were 1) to study outcomes that online learning affected, 2) to study key factors in online learning process, 3) to study the characteristics of research studies that associated with online learning, 4) to propose the framework of effective online learning for Thailand's higher education, and 5) to synthesize the state of knowledge on online learning. This research studied selectively 114 theses conducted during the years of 1999 to 2009. The research tools included the questionnaire to record the characteristics of the research studies and the form to assess the quality of the research studies. Then the data were analyzed by using meta-analysis together with the content analysis.

The results of synthesis of research showed that researches on online learning had focused on the development of learning outcomes through learning achievement mostly, and then focused on learning satisfaction, critical thinking and problem solving, self-directed learning and collaboration, respectively. The factors in online learning process consisted of 13 key factors that had different effects depending on the purpose of learning outcomes and the principles of student-centered instruction that were used together with the design of online learning. The synthesis of this research in the aspect of characteristics of research studies indicated that online learning researches using one group pretest-posttest design affected on the learning outcomes more than those using other designs. Additionally, the framework of effective online learning for Thailand's higher education to focus on learning achievement, self-directed learning, critical thinking and problem solving, and collaboration was proposed.

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