EKACHAI PHUMDUANG : THE DEVELOPMENT OF COMPUTER ASSISTED INSTRUCTION ON BIODIVERSITY FOR STUDENTS AT UPPER SECONDARY SCHOOL LEVEL. THESIS ADVISORS: RACHANONT SUPAPONGPICHATE, Ph.D., WASIN PLUMCHAROEN, M.Ed., MANOP LAUPRASERT, M. Sc., 151 p. ISBN 974-663-838-6

The objectives of this study were to develop material for computer assisted instruction on biodiversity for students at upper secondary school level, and to examine the efficacy of the instruction in terms of student's learning and the quality of computer assisted instruction. The t-test was employed to test the differences between the pretest posttest scores of the experimental group and the control one. The developed computer assisted instruction was submitted for preliminary testing by a small group and subsequently by a larger group comprising 9 students and 30 students respectively. Experimental testing was then conducted with the sample group. The sample group was comprised of 192 students at upper secondary school level from Wat-Intaram school.

Analysis of data revealed that after taking the computer assisted instruction, the posttest scores of the experimental group were significantly higher than their pretest ones at the 0.05 level. In addition, it was found that the posttest scores of the experimental group were significantly higher at the 0.05 level than those of the control group who did not take the computer assisted instruction. It was also found that the efficacy of computer assisted instruction was 80.067/83.815.

On the basis of the above findings, it can be concluded that the computer assisted instruction developed by the researcher was appropriate and of good quality for enhancing the upper secondary school students' knowledge about biodiversity.