Khwansiam Choosuwan 2009: The Construction of Mathematical Computer – Assisted Instruction on "Addition and Multiplication Matrices" of Mathayomsuksa Six Students at Rittiyawannalai School , Bangkok Metropolis. Master of Science (Mathematics Education), Major Field: Mathematics Education, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Kannika Kongsakorn, M.S. 143 pages.

The purposes of this research were 1) to construct the mathematical computer – assisted instruction on "Addition and Multiplication Matrices" of mathayomsuksa six students and 2) to compare mathematics learning achievement on "Addition and Multiplication Matrices" of mathayomsuksa six students at Rittiyawannalai School before and after learning by using computer – assisted instruction.

The sample group was 48 students selected by cluster random from 5 classroom with 250 students of Mathayomsuksa Six Students in mathematics and science program who enrolled in the first semester of the 2008 academic year at Rittiyawannalai School , Bangkok Metropolis. The research instruments were the mathematics learning plans , the computer – assisted instruction , exercises , and the achievement test.

The result showed that 1) mathematical computer – assisted instruction on "Addition and Multiplication Matrices" of mathayomsuksa six students had the efficiency of 86.96/86.88 and 2) the learning achievement of computer – assisted instruction after learning was higher than before learning at 0.05 level of significance.

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