

Title : A DEVELOPING OF COMPUTER-ASSISTED INSTRUCTION ON
MATHEMATICS PROGRAM FOR FIFTH-GRADE STUDENTS.

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The main purpose of this study was to develop computer – assisted instruction program on Mathematics for fifth-grade students. The minor purposes were 1) to survey the Mathematics studying problems for fifth-grade students 2)to construct and study the efficiency of computer-assisted instruction program on Mathematics 3) to experiment using computer-assisted instruction program on Mathematics in order to compare Mathematics achievement between the experimental group and controlled group and 4) to evaluate Mathematics computer-assisted instructions program on Mathematics for fifth-grade students. The study was divided into 4 steps as follows.

First: To survey problems. The simple random sampling was employed in selecting 241 teachers who were teaching fifth-grade students in academic year 1999 in the primary schools under control of Phitsanulok Primary Education Office.

The sample was asked to fill in the questionnaires which were constructed by the researcher, on problems in teaching Mathematics. The collected data was analyzed by mean and standard deviation.

Second: to construct and study the efficiency of the computer-assisted instruction program, the researcher constructed computer-assisted instruction program on Mathematics and has experience to construct the computer-assisted instruction program and examined by five Mathematics experts. The computer-assisted instruction program were experimented with nine students on fifth-grade students in order to find 80/80 standard efficiency. The instruments used were the computer-assisted instruction on Mathematics program on content of Problem solving subject about

Third: to experiment using computer – assisted instruction program, the sample was sixty fifth-grade students studying in second semester of academic year 1999 at Anubanphitsanulok School, Muang, Phitsanulok Province, divided into a treatment group and a control group, each with 30 students. Both the treatment and the control groups each consisted of 10 students with high mathematical ability , 10 students with average mathematical ability, and 10 students with low mathematical ability. The instrument used were the computer- assisted instruction Mathematics program for fifth-grade students under content of Problem solving subject about multiply division, and Mathematics achievement test.. The collected data was analyzed by Two Way Analysis of Variance.

Fourth: to evaluate the computer – assisted instruction on Mathematics program, the sample was 3 teachers and 30 students who used or studied with the computer – assisted instruction program on Mathematics in Anubanphitsanulok School, Muang, Phitsanulok Province.

The instruments used were questionnaire and structured interview. The collected data was analyzed by ways of mean and standard deviation.

The results of the study were:

1. Mathematics Problems were found most under the content of Problem solving subject multiply division.
2. Computer- assisted instruction on Mathematics program had the efficiency of 85.69/80.00 .
3. Tutors and levels of Mathematics learning abilities had interactions with Mathematics achievements.
4. Mathematics teachers who used the Computer-assisted instruction program on Mathematics agreed that the Computer- assisted instruction program was appropriate at high in the designing and the presentation whereas the experiment groups agreed that the computer-assisted instruction was appropriate at the moderate in the designing and the presentation.