

DEVELOPMENT OF MATHEMATICS LESSON PLANS USING ICT BY PROSPECTIVE ELEMENTARY SCHOOL TEACHERS¹.

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In the era of information and technology, mathematics teachers need to take advantage of ICT(Information & Communication Technology) in their lessons. The purpose of this study was to foster professional development of pre-service elementary school teachers in terms of incorporating ICT in mathematics lesson plans in a way to achieve their instructional goals. The subjects were about 170 juniors who took a course of elementary mathematics teaching method for fall semester in 2003.

We emphasized that lesson plans with ICT should consider the characteristics of elementary mathematics teaching and learning, student-centered activities, development of mathematical power, effective use of various multimedia materials, connection to real-life contexts. Whereas previous studies tended to focus mainly on developing teaching activities per se, this research underlined not only activities but also plans in order to improve overall instructional design ability of prospective teachers.

We developed six instructional models using ICT that are appropriate to elementary mathematics teaching. Learning the different aspects of the models, the pre-service teachers developed their own lesson plans, which were reviewed by teacher educators as well as in-service teachers and were partly applied to mathematics classrooms. Given the various feedbacks, 229 lesson plans were finally developed and have been serviced through EDUNET, the most comprehensive educational information service on-line system in Korea. This poster presents exemplary lesson plans and instructional activities with each model.

¹ This study was supported by the Korea Education & Research Information Service Grant in 2003.