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IDENTIFYING ICT-BASED CORE COMPETENCIES FOR EDUCATING GIFTED STUDENTS IN SCIENCE

Abstract:

ICT education is an essential part of education programs for gifted students as it is for general students. In order to develop curriculum for enhancing ICT competencies of gifted students, we should be able to identify and define ICT-based core competencies themselves as the initial stage.

This research was conducted as the first part for developing ICT education programs for gifted students in Science. We surveyed 232 experts, most of whom are teaching gifted students in science. As the results, we could verify that ICT education should be an important and essential aspect of gifted education, and that Lee's(2013) model can be useful frameworks for educating those ICT competencies for gifted students.

Lee(2013) suggested a model named "ICT-based core competencies for the Creative and talented of the future society" which was developed for educating gifted students. This model is composed of three core competencies, which are (1) knowledge and skills competency(K&S), (2) synthesis and creativity competency(S&C), and (3) creative mind competency(CM). In this model, each core competency is made of three factors(ex, K&S of pursuing knowledge in various areas, design ability, and realization ability), and each factor is made of three elements(ex, realization ability of programing, precision, and utilizing resources)

We expect that ICT education can be effectively and efficiently developed and conducted by using Lee's model.

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ICT Competency, ICT Education, Gifted Education

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