

E1 – NEW METHODS OF ANALYSIS IN HUNGARIAN EDUCATION RESEARCH

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Symposium Presentations

Some effects of community based inquiry learning supported by networked technology

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Károli Gáspár University of the Reformed Church in Hungary
Henriett Pintér
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Confirmatory factor analysis of the Subject Specific Mastery Motivation Questionnaires

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Relation between parenting style, mastery motivation and school achievement in adolescence

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The relationship between the enactive and symbolic levels of seriation and classification

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SYMPOSIUM ABSTRACT

Recently there has emerged a growing body of research which uses new techniques of analysis, ones enabling answers to more complex research questions. These methods, like path-analyses, confirmatory factor analyses and structural equation modeling are well known in the international literature. However, we have relative limited knowledge about them in Hungary. Thus, the aim of this symposium is to show different aspects and different examples of using these methods in the field of educational research. The first presentation analyzes the relationships between friendship network and online collaborative learning environment among undergraduate students (N=119). In this study we applied path analyzes. The results show, the more friends a student has, the more positively and actively he or she participates in a collaborative learning situation and also the more he or she learns more from this situation. The next study is an example for using confirmatory factor analysis. We developed a new questionnaire for measuring subject specific mastery motivation. The large scale cross-sectional sample of students (N=405) gave a self-rating of their motivation, and, in addition, their parents (N= 1,098) and teachers (N=1,787) rated the students' motivation. The results highlighted that the parents', teachers' and also the students' versions of the instrument have good structural validity. The new scales have high reliabilities and good model fits. In the third paper we analyzed the relationships between parenting style, the child's mastery motivation and academic achievement (N=296). We considered these variables as latent variables. Using structural equations modeling (SEM), we tested different possible models to identify the best one. According to the results, parenting style plays an important role in the level of mastery motivation, but its direct effects on school success are not unambiguous. Still, motivation determines school achievement. The last paper uses a longitudinal method to analyze the development of two of the reasoning skills, Piagetian seriation and classification, together referred to as systematizing skill. We measured its enactive level in the first grade and its symbolic level two years later, in the third grade. We considered the skills as latent variables and applied structural equation modeling. We found that the enactive systematizing level predicts the development of symbolic systematizing.

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