

# POSSIBLE RESEARCH TOPICS IN TWENTY-FIRST CENTURY HUNGARIAN MATHEMATICS EDUCATION

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The knowledge that the world considers useful is changing much faster than the education system can respond. That is why it is particularly important to train teachers with a progressive approach who can respond to the needs of their students in a meaningful way. In this presentation we will outline some of the issues and tools that may help us to deliver convertible knowledge to members of Generation Z and Alpha in a form that is accessible to them.

Today, board games are enjoying a renaissance. Unfortunately, their educational potential has not yet been translated into textbooks and teaching materials. Even the simplest questions posed by games are developmental, and classroom games provide opportunities for autonomous learning through cooperative methods.

An ongoing research will be presented on the potential of mobile devices, students' knowledge and attitudes towards apps. Examples of apps with mathematical content that can be used for different educational purposes will be presented. We will also look at the untapped world of mobile games in education.

The content of the renewed curriculum will focus on statistical analysis and financial calculations. In addition, a renewal in approach has led to the need for tangible applications of simple mathematical tools. There is a rapid need for methodological improvements in these areas.

The integration of artificial intelligence into education, which is perhaps not yet convincing in all areas, is inevitable.

I trust that the lecture will be useful for all students pursuing a doctorate in didactics and those considering starting their studies.

- [1] L. A. BRAGG, Testing the effectiveness of mathematical games as a pedagogical tool for children's learning, *International Journal of Science and Mathematics Education* **10(6)** (2012), 1445–1467.
- [2] A. MÁDER, Mobil játékok a felfedeztetés-központú matematikaoktatás szolgálatában, *Mobil-Világ-Iskola (szerk: Aknai Dóra Orsolya, Fehér Péter)*, Debrecen University Press (2017), 233–239.