

ICT SKILLS ASSESSMENT

Ágota Tongori

Graduate School of Educational Sciences, University of Szeged

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ICT skills have become inevitable when using information in the 21st century and are categorised as a complex of ICT-related knowledge, proficiencies, skills, abilities and competences comprising ICT literacy (Ainley, Fraillon, & Freeman, 2005; Katz & Macklin, 2007; Law, Lee, & Yuen, 2010). The research project ATC21S (Griffin, McGaw, & Care, 2012) also regards them as essential. This presentation aims to give an overview of ICT skills definitions, and a short review of three examples of major research into large-scale ICT skills assessment. Three studies have been chosen from online databases with an emphasis on computer-based simulation-type performance assessment of the cognitive skills associated with using ICT in educational environments. Two report on samples from two grades of primary or secondary education (n=2600 Hong Kong; n=7400 in Australia) and one reports on samples from higher education in the US (n=4048). It is demonstrated that higher grade students performed significantly better than lower grade students, however, not in less frequently used ICT application areas. The US study claims that, with one exception, there are moderate but significant correlations between all measures of the self-report test and the performance supporting the convergent validity of the assessment. The US study gave evidence of the possibility of devising valid and reliable tests to gauge ICT skills, a most integral part of 21st century literacy. ICT skills should be integrated in the curriculum of every subject area to enable students to master indispensable skills especially in the field of less frequently used ICT applications.