Session Overview

Session
G: Paper Session 2: Digital assessment tools

Time: Friday, 31/Aug/2018: 9:00am - 10:45am
Session Chair: Dr. Arto K. Ahonen, University of Jyväskylä
Location: Room 360
Third Floor

Presentations

**Predictive validity of technology-based school-readiness assessments**
Benő Csappó1, Gyöngyvér Molnár2, Attila Pálsztor3

The aim of this study was to explore the predictive validity of a technology-based diagnostic test battery applicable at the beginning of primary school. Participants in the study were 5996 primary school pupils represented from the first-grade school population of Hungary. Five tests (ICT familiarity, following instructions, inductive reasoning, early literacy and early numeracy) were administered at the beginning of the first school year, with reading and mathematics tests given at the end of the first and second school years. The results indicated that pupils’ ICT literacy was adequately developed and thus no hindrance to computerized assessment. Medium-level correlations were found between the initial tests and later reading and mathematics achievement, confirming the predictive validity of the instruments.

**Designing Multimodal Digital Classroom Assessments**
Henning Fjørtoft

Multimodal and digital classroom assessments (MDCAs) raise a range of validity issues. This study explores the validity of teacher constructed MDCAs. Four teachers (mathematics, L1, and L3 instruction), a teacher educator and an educational technology consultant collaborated to confront problems of practice in teachers’ assessment routines using digital and multimodal practices. Adopting a design-based approach, the project aimed to experiment with and optimize assessment practices, and develop contextualized principles for future assessment practices. Three narratives of MDCAs practices are presented. A rich repertoire of modalities available for students lowered stakes, improved conditions for student participation, and afforded longitudinal collection of disaggregated data, thus improving validity. However, new threats to validity were discovered, requiring constant attention to construct representation, purposes of assessment, and literacy demands. The paper explores the affordances of multimodal digital classroom assessments and the relevance and potential threats to validity of such practices.

**A digital self-assessment model to foster student learning**
Henna Asikainen, Sara Linholm

University of Helsinki, Finland

One of the core purposes of education is to develop student self-assessment abilities such as making judgements about their own performance and capabilities. Research on assessment have shown that self-assessment increases students engagement and motivation in learning and improves students’ skills to assess their own abilities and learning. The study aimed to explore validity of a digital self-assessment model in a Master course in environmental sciences. In addition, the purpose was to analyse how the self-assessment was experienced by the students and how it was related to their approaches to learning and self-efficacy beliefs. A total of 52 students participated this study. The qualitative data was analysed with cross tabulation and One-way Anova. Students experiences were analysed with inductive content analysis. The results show that the digital self-assessment model reflect student performance quite well. In addition, students who had lower self-efficacy beliefs and higher surface approach to learning assessed their performance lower. The results suggest that self-assessment helped students to learn in the course and they were more able to recognise the learning goals of the course or what was expected of them. This study suggests that developing a summative self-assessment model can foster students learning.

**Assessing the 2nd & 3rd years pupils’ inductive reasoning by introducing computer-based testing in Palestine**
Mojahed Moussa, Gyöngyvér Molnár

University of Szeged, Hungary

Computer-based assessment is becoming more and more popular, but its applicability still raises several questions if it is going about measuring pupils at the beginning of schooling. This study introduces and tests the applicability of computer-based testing in Palestine by measuring second (N=28) and third (N=20) grade students (age 7-8) basic mouse usage and inductive reasoning skills. Both the mouse usage test (28 items) and the inductive reasoning test (36 items) consisted of figural items and were adapted to Palestinian Arabic. The inductive reasoning test comprised two subtests: figural series and figural analogies. Instructions were given online using headsets.Automatic scoring was used and instant feedback was provided at the end of the tests. The online data collection was carried out via the school infrastructure. The reliability coefficient of the mouse usage and inductive reasoning tests were .75 and .915, respectively. The mouse usage test was easy M=43.46, SD=19.67%, while the inductive reasoning test was moderately difficult for the students at this age M=43.46, SD=23.7. The frequency of computer usage did not influence test achievements. In the inductive reasoning test girls achieved significantly higher (M girls=50.88, M boys=37.67, t=2.15, p<.05). Students with higher school achievement proved to be more developed in inductive reasoning skill (M school advanced=60.49, M school average=44.3, M school low=26.46, F(1,13.62, p<.001; r=.58, p=.001), which indicates that its development must be included in the Palestine school curriculum. The results of the analysis indicated that computer-based testing can be introduced and effectively used in Palestine even at the beginning of schooling.