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Session Information

09 SES 05 C JS, Students? Computer and Information Literacy from a European Perspective. Findings from ICILS 2013. (Part 2)

Symposium Joint Session NW 09 with NW 16 continues from 09 SES 04 C JS

Time:2015-09-09
11:00-12:30

Room:334. [Main]

Chair/Discussant:Julia Gerick/ Paulina Korsnakova

Contribution

Secondary Analyses on Gender Differences in the Computer- and Information Literacy Test

The results from IEA?s International Computer and Information Literacy Study show significant gender differences in computer and information literacy (CIL) in the majority of the participating countries (Fraillon et al., 2014). However, on which aspects these differences are most significant and how these differences vary across countries is yet unclear. The international study report mentions that the two CIL strands are strongly correlated (0.96; Fraillon et al., 2014) and that the mean achievement of students across countries varied little when data from both strands were analysed separately. Though the choice for a single, one-dimensional CIL scale is well supported, it is still useful to create subscales for secondary analyses to gain a better sight at where the differences in CIL between boys and girls stem from. For this study we propose to create subscales using the Rasch Item Response Theory (IRT) model (Rasch, 1960) and further explore in which aspects of the CIL construct and test, differences surface. By creating several subscales and comparing student groups on these scales within and across countries, the following research questions are to be explored: - On what type of tasks (e.g. open tasks vs. closed ended questions) and in which content areas within the CIL construct are gender differences most prominent? - Are these differences consistent across European countries participating in ICILS? Using the item mapping for the CIL framework (Fraillon, Schulz, & Ainley, 2013) and expert reviewing of the items, subscales will be computed, applying the Rasch IRT model, based on items for which differences between groups are expected to be significant. For boys and girls in Czech Republic, Germany, The Netherlands, and Norway, differences on the different scales will be computed and contrasted. The results provide clarity on which aspects of CIL might best be targeted to further enhance students? CIL.

References

Fraillon, J., Ainley, J., Schulz, W., Friedman, T. & Gebhardt, E. (2014). Preparing for Life in a Digital Age. The IEA International Computer and Information Literacy Study International Report. Springer, Cham. Fraillon, J., Schulz W., & Ainley, J. (2013). International Computer and Information Literacy Study: Assessment Framework, Amsterdam: IEA. Rasch, G. (1960). Probabilistic models for some intelligence and attainment tests. Copenhagen, Denmark: Nielsen & Lydiche.

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