

Cluster: Social inequality

Project 7: ICT-competency and social inequality in student performance. What roles do family-, school- and country-level factors play?

Aim

To investigate how gender and social background differences in educational performance are related to ICT-familiarity at the micro (family), meso (school/teacher) and macro (country) level?

Background

This research proposal investigates social inequality in students' educational performance, and innovatively connects it to aspects of ICT. Previous research on the so-called "digital divide" clearly showed that ICT-competency is highly differentiated according to an individual's gender and family background. We therefore plan to investigate ICT-competency as a relevant, contemporary explanation for performance differences between girls and boys, and between students from different family backgrounds. A first research question reads: To what extent are gender and family background differences in educational performance explained by children's own ICT-competency? Additionally, it may be expected that ICT-related family, school and country factors are relevant in explaining performance differences between girls and boys and between children from different social backgrounds. So, our second research question states: To what extent are gender and family background differences in educational performance related to ICT-familiarity at the micro (family), meso (school/teacher) and macro (country) level?

Theoretically, ICT-familiarity may affect students' educational performance through several socializing, developmental, normative and conditioning mechanisms. A general expectation is that more ICT-familiarity in the family, at school and in a country is beneficial for children's performance and to some extent will attenuate social inequality between boys and girls, and between children from various family backgrounds.

Research design

To answer our research questions, we will employ quantitative data from PISA, TIMMS and PIRLS, bringing together information on developments in educational inequality and ICT between 2000 and 2018 in more than 40 countries to achieve a better understanding of the beneficial role of ICT-familiarity for the reduction of inequality in children's educational performance.

Literature

Notten, N., & Kraaykamp, G. (2009). Home media and science performance: A cross-national study. *Educational Research and Evaluation*, 15(4), 367-384.

Hu, X., Gong, Y., Lai, C., & Leung, F. K. (2018). The relationship between ICT and student literacy in mathematics, reading, and science across 44 countries: A multilevel analysis. *Computers & Education*, 125, 1-13.

Project initiators

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Location

Nijmegen