The relationship between educational inequalities and ICT access and use at home

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## Sample

Analyses was performed on the Hungarian sample of the 2012 PISA data including 4810 15 years old students.

## Implications For Educators About

School innovation

# Abstract

Th e appearance of info-communication technologies caused a restructuring in the determining
factors of educational inequalities. The aim of our article is to analyse the effect of ICT access and ICT use at home on student performance. For our analysis we apply the Hungarian subsample of the latest student level dataset of the OECD Programme for International Student Assessment (PISA) recorded in 2012. As we suppose that the relationship between ICT access, ICT use and student performance is affected by family background and student characteristics, beyond bivariate analysis we apply multivariate models to control for these effects. Our results suggest that the impact of ICT access and ICT use on student performance is rather positive even if family background and student characteristics are controlled for. However some modes of use seem to have rather a negative effect on performance

# Outcome

According to the data computer and internet availability showed a positive connection with higher test scores both in mathematics, reading and science even when family background variables were controlled. When analyzing the results by usage types it was found that entrainment related usage had a positive effect of reading skills, but only moderate. However, practical use leads to better performance, while playing games have a negative effect. Gender and family background also have a strong connection.

"The use for entertainment and communication, as browsing the internet for fun, chatting, uploading
and downloading contents, etc. seems to contribute to a better achievement mostly in case of
reading and science, but this effect is moderate. Therefore gender and family background do
not have a strong influence on this relationship either. Practical use of a computer leads to a
better performance regarding all three competencies. However the results implicate that this
mode of use is strongly affected by family background as achievement points lower remarkably
after controlling for wealth, education of parents and cultural possessions at home. Due to our
results the third mode of use, playing games on the computer sets back performance. Th is effect
is strongly influenced by gender and family background as well." (Vincze, Anikó (2016): Th e Relationship between Educational Inequalities and ICT Access and Use at Home. Belvedere Meridionale vol. 28. no. 1. 5–26. pp, p: 112)