The impact of digital skills on educational outcomes: evidence from performance tests

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## Sample

2025 students from 100 classrooms in 51 different schools in Lombardy. After matching the sample with INVALSI data the final sample contains 1466 students with reading test score and 1443 students with math test score.

## Implications For Stakeholders About

Researchers

# Abstract

Digital skills are increasingly important for labour market outcomes and social participation. Do they also matter for academic performance? This paper investigates the effects of digital literacy on educational outcomes by merging data from the Italian National Assessment in secondary schools with an original data-set on performance tests of Internet skills for tenth-grade students. Our identification strategy relies on a rich set of individual, family, school and classroom control variables that are not commonly available in previous studies. The findings indicate that, overall, Internet skills have a positive impact on academic achievement. This effect is stronger for students with low academic performance or low family background. It is also stronger for students in technical or vocational schools.

# Outcome

"we find that the effect of digital skills varies by student characteristics. In
particular, quantile regression results indicate that students with lower reading academic
performance are those who benefit more from digital literacy, while for math we find a
U-shape relationship between digital skills and student achievement. We also find that the
effect of ICT literacy is stronger for students with a lower socio-economic background, suggesting
that digital skills might act as a substitute for family background, by facilitating the
acquisition of academic ability. Stronger effects of digital literacy for students with lower
school achievement and socio-economic background suggest that programmes aimed at
increasing internet information skills among the youth can play an important role in reducing
educational inequality and, in turn, lowering inequalities in the labour market." (Pagani et al., 2016, p. 157)