The relationship between the age at first computer use and students' perceived competence and autonomy in ICT usage: A mediation analysis

# Details

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123,983 15 year old students, 5617 from Switzerland

## Implications For Parents About

Parental practices / parental mediation

## Implications For Educators About

Digital citizenship

# Abstract

Knowledge and skills with information and communications technology (ICT) usage are an essential
part of modern life. In recent years, the age at which children have their first contact with
ICT and first use of ICT has been decreasing. This can significantly affect the development of their
digital literacy. This study investigates the relationship between the age at which children start
using a computer and the degree of their perceived ICT competence and autonomy at the age of
fifteen. It proposes a multiple mediator model within which the investigated relationship is
mediated by ICT usage, ICT interest, and the degree to which ICT is a part of students' everyday
social interactions. The model is then tested using data from 21 European OECD countries. The
test results show that children who start using a computer at a later age (after the age of seven)
demonstrate significantly lower ICT competence and ICT autonomy at the age of fifteen. The
results of the mediation analysis suggest that the degree of ICT usage in the home environment
for school purposes or activities seems less significant to the development of ICT competence and
ICT autonomy than other studied ICT-related variables.

# Outcome

The test results show that children who start using a computer at a later age (after the age of seven) demonstrate significantly lower ICT competence and ICT autonomy at the age of fifteen. The results of the mediation analysis suggest that the degree of ICT usage in the home environment for school purposes or activities seems less significant to the development of ICT competence and ICT autonomy than other studied ICT-related variables.