

Technology based problem solving skills of the Austrian workforce

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Technology based problem solving relates to a competency to solve specific tasks with the use of technology, particularly computers. It is an aspect of digital literacy and therefore one of the key competencies of our knowledge society. Influencing peoples' work as well as their private lives it is nearly a prerequisite for participation in society nowadays.

This contribution focuses technology based problem solving of the Austrian workforce. It can show that particular subsamples have different characteristics and that current computer use has a particular impact on it. Looking first at the computer use, we can see that the primary activities relate to e-mails and information inquiry on the Internet—at work as well as at home. While the use of text processors and spreadsheets is an essential aspect of computer use at work, transactions on the Internet get more prominent at home. Generally, users show more diversity but less intensity regarding the use of computer applications at home.

Focusing now on technology based problem solving in particular, we can see that the competency decreases independently of sex and educational level with growing age. We can also see that the educational level is not necessarily associated with the competency: regarding some subsamples we can observe higher levels for students with college degrees than for the respective subsamples with university degrees. Furthermore, the competency distribution does not support traditional gender stereotypes: Women in the age of 35-44 with college or university degree that use computers only at home score higher in competency than the respective male subsamples.

When setting the variables in a context to be able to estimate the impacts of the different factors, we can see that the strongest impact relates to the current computer use, followed by age and the number of years in formal education. Differences in gender just show a marginal impact for the explanation of variance.

The contribution concludes with a discussion regarding the conceptualization and measurement of technology based problem solving with respect to the internal and ecological validity of the concepts used in the PIAAC study and provides suggestion for a reconceptualization.

Keywords: technology based problem solving, computer use, individual differences, age, gender, educational level