

Understanding how to teach 'intelligence'

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More than ever, we need problem-solving skills to be able to adapt to our fast changing economies and societies. Researchers at the University of Luxembourg believe it is possible to teach these skills which are widely known as "intelligence".

"Our research indicates that it should be possible to understand the complex psychological processes that enable people to solve problems, a construct that is more popularly understood as 'intelligence'", explains Romain Martin, Professor of Psychology and Empirical Educational Research at the University of Luxembourg. "With this knowledge we could design programmes to train people to be adaptable throughout their lives," adds Samuel Greiff, Professor of Educational Assessment at the University of Luxembourg. This analysis is detailed in a recently published paper compiled by the University of Luxembourg with input from an international group of academics.

At the basis of general [problem solving](#) is the ability to use strategies acquired in one area in a wide range of other tasks. Facts are widely available thanks to technology, but it requires particular skill to covert this diverse, plentiful information into useful knowledge. It remains important to maintain traditional educational goals of teaching facts and different problem solving strategies, but new cross-curricular skills, indicating mental processes that are relevant in a number of situations and across several domains, are also needed.

University of Luxembourg researchers see strong evidence that this cross-curricular ability can be learned and is not simply a naturally acquired

trait. The science is not yet sufficiently advanced to understand how the mechanisms work, for example how problem solving strategies can be employed to find a solution for different problems across domains. Fundamental research is required to deepen understanding and then this could be translated into practical programmes for action.

This work opens the possibility of revolutionising education. It could offer a path towards equipping all students for the knowledge economy, even those who are currently classified as being "non-academic". The paper calls upon educators, governments, international bodies and researchers to work together to unlock the secrets behind how people learn to become intelligent.

More information: "Domain-general problem solving skills and education in the 21st century", Samuel Greiff et al is published in the journal *Educational Research Review*. [DOI: 10.1016/j.edurev.2014.10.002](https://doi.org/10.1016/j.edurev.2014.10.002)

Provided by University of Luxembourg

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