

# Highly gifted children benefit from explanation as much as their peers

January 19 2017

---

We often assume that highly gifted children always perform at maximum capacity. Psychologist Bart Vogelaar discovered that this group too benefits from training and explanation. Strangely enough, the benefits are the same for both groups. PhD defence 18 January.

When children have tests at school or when their learning abilities are assessed, they don't always show their full potential. Exam stress and/or lower metacognition - knowledge that makes learning easier - can cause a child to underperform. This problem can be countered using dynamic tests, where children receive [training](#) during the test and their progress is measured to give a better image of their learning capabilities. 'The general assumption is that gifted children always work to their full potential in such tests and that they don't need training or explanations,' development psychologist Bart Vogelaar explains. 'I'm not sure that assumption is correct.'

## Measuring progress

For his PhD research, 522 children aged between five and ten years - 173 highly gifted and 349 averagely gifted - took part in dynamic testing with a so-called learning potential test. The children had to solve [analogical reasoning](#) tasks, comprising four boxes with different geometric figures. The first three boxes were filled with figures that changed from one box to the next according to a particular rule, for example, in size or in position. The children had to use analogical

reasoning to draw the figure in the last box.

## **Starting assessment**

The test comprised an initial assessment based on a series of tasks, after which the children were given a training session followed by a further set of tasks as a post-assessment. Vogelaar: 'This kind of test gives a better insight into how well children learn because we are able to measure not only how much they progress on a new task, but also how much and what kind of help they need to achieve this progress.'

## **Training helps**

The test showed that all groups of children made progress, from the starting to the post-measurement, with major individual differences. 'It confirmed that highly gifted children also benefit from explanation and training, and that they don't always show their full potential in tests.' Vogelaar concludes from this that dynamic testing gives better insight into the reasoning capabilities and learning process of children - whether or not highly gifted - than conventional testing, such as with an IQ test.

## **Equal training and instruction**

What really surprised Vogelaar was that the two groups of children were not very different from one another. The test showed that highly gifted children have the same need for instruction as averagely gifted children, and that they exhibited the same degree of progress from the starting to the post-assessment. The highly gifted children started at a higher level of reasoning, but made the same amount of progress as their averagely gifted peers.' These findings suggest that they learn just as much from the training and instruction as averagely gifted children.

## Highly gifted children also need extra support

Schools tend to assume that highly gifted children can manage by themselves and that they do not need any extra support. As a result, they sometimes seem to be forgotten. Vogelaar's research shows that highly [gifted children](#) also need extra learning support. 'The fact that these children are clever does not mean that they always perform to maximum capacity.'

Provided by Leiden University

Citation: Highly gifted children benefit from explanation as much as their peers (2017, January 19) retrieved 25 April 2024 from <https://phys.org/news/2017-01-highly-gifted-children-benefit-explanation.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.