

NEWS RELEASE 6 MARCH 2014

Practice doesn't make perfect for kids

- *Study finds children's IQ actually decreases when asked to repeat task*
- *Also suggests that artistic creativity begins at age 12*

Children's mental ages decrease significantly when asked to repeat the same drawing task, a study has shown.

Research carried out by London Metropolitan University found that children who were asked to draw the same picture three times showed a shocking deterioration in ability, with some creating work associated with mental ages well below their actual age.

The findings raise questions about teaching approaches that place an emphasis on repetition leading to improvement, or 'practice making perfect'.

The study was conducted by psychologists at London Metropolitan University to investigate whether children's mental age can be improved by practice. The researchers used the Naglieri 'Draw-A-Person' test, a well-known method of measuring children's IQ.

A sample of 80 children between ages 6 and 12 were asked to complete two drawing tasks in one hour. Half the sample were asked to draw a man or woman three times, followed by drawing a policeman or policewoman three times. The other half were asked to draw the police officers first, then the man or woman.

The results shocked psychologists running the study.

"We were very surprised to see such a level of deterioration in IQ mental age," said Dr Christiane Lange-Küttner, from London Metropolitan University. "It is commonly assumed, even by experts in the field, that practice helps improvement. Our findings show, however, that the opposite is the case.

"This regression in children has never been found before."

Over the course of the test, the children's average IQ score peaked at 107 by the second drawing, before crashing to 96 by the final sketch, a difference of 11 IQ points. In some children, the decrease was even higher. A seven year old boy, for example, originally drew a detailed drawing of a man but had reverted to the 'tadpole' form

(where legs are attached directly to the head) associated with the mental age of a 4-year-old by the end of the test. (See Figure 4, attached). The drawing IQ improved considerably when the children were asked to draw the new image of the police officers, but not enough to recover to the initial level.

“Regression of achievement level is a concept that has been used in Psychology for decades, but could not be demonstrated in this area until now. Here we could witness it first hand for the first time,” Dr Lange-Küttner added.

The study also found strong evidence that children’s artistic creativity blossoms at age 12. Children in the study showed a different take on each drawing at this age, despite the teacher’s instructions remaining the same. They were drawing another person on each occasion, and hence did not lose out on details that were winning them IQ points.

“It is possible that they dared to rely on their own intentions rather than just listening to what the adult says,” Dr Lange-Küttner said. “They were forming different action plans for each of their creations rather than following a do-as-I-say approach.”

The study could have implications for education as the findings suggest a rethink is required about how younger children are taught.

“For some areas, like improving memory, we know repetition works,” explained Dr Lange-Küttner. “But we have found no evidence that repetition helps performance in a task that requires a plan and executive skills. In fact it has a damaging effect.”

This study shows that different approaches are needed to encourage children’s initiative than perhaps previously thought.

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Notes to editors:

The full research paper, *Deterioration and Recovery of Draw-A-Person IQ Scores in the Repeated Assessment of the Naglieri Draw-A-Person Test in 6-to 12- Year-Old Children*, is available on request. Images can be provided.

London Metropolitan University

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