

Children found capable of using the 'wisdom of crowds'

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Children, like adults, can improve their response to difficult tasks by the power of group work, new research led by the University of Bristol has found.

The 'Wisdom of Crowds' is well documented in [adults](#), but previously children were thought to lack the social and [cognitive skills](#) to make effective group decisions together.

The study, published today in *PLOS ONE*, evaluated the habits of 219 pupils from schools in the South West of England between the ages of 11 and 19 revealing that in fact, pupils as young as 11 years possess the skills necessary to 'crowdfund' knowledge in order to decipher the correct answer.

Participants were asked to guess the number of sweets in a jar individually and then after discussion, to give a group answer. The researchers looked at how the children used their original guesses to come to a final group answer.

An international team of scientists led by Dr. Christos Ioannou from the University's School of Biological Sciences found that the children reduced their estimation error after group discussion. Even more surprising, to reach a group consensus, they intuitively used a geometric mean rule-of-thumb to combine their guesses, especially when there was a lot of disagreement.

Collective intelligence has rarely been investigated in children, although there has been a lot of research using adults and other animals such as bees, ants and fish.

Since children are not as socially and cognitively developed as adults but have better skills than most other animals, investigating how collective intelligence works in children might be the bridge to connect research on adults and other animals.

Looking at [collective intelligence](#) in humans while still in their developmental stage might reveal how and why humans are so

remarkable when working in groups.

Dr. Ioannou, Lecturer and NERC Fellow in the School of Biological Sciences, said "This result suggests that children naturally dealt with the estimates on a logarithmic scale. Using a geometric mean is the best way to combine estimates of the number of sweets when there was a lot of disagreement in the group, and the [children](#) spontaneously used that method."

More information: 'Adolescents show collective intelligence which can be driven by a geometric mean rule of thumb' by Christos C. Ioannou, Gabriel Madirolas, Faith S. Brammer, Hannah A. Rapley, Gonzalo G. de Polavieja in *PLOS ONE*.

Provided by University of Bristol

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