

## SCIENCE

### The Preference of the Use of Intuition over Other Methods of Problem Solving by Undergraduate Students

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Intuition is a quick and unconscious decision-making process that individuals often use in their daily lives. Research has found that intuition is one of the main factors that plays an essential role in decision making that is independent of analytical thinking. The research team for this study has been trying to understand intuition while breaking down the thinking processes that individuals undertake to make effective decisions. The study is designed to identify the impact of specific factors (gender, major, ethnicity, year of classification) on the use of intuition while solving problems.

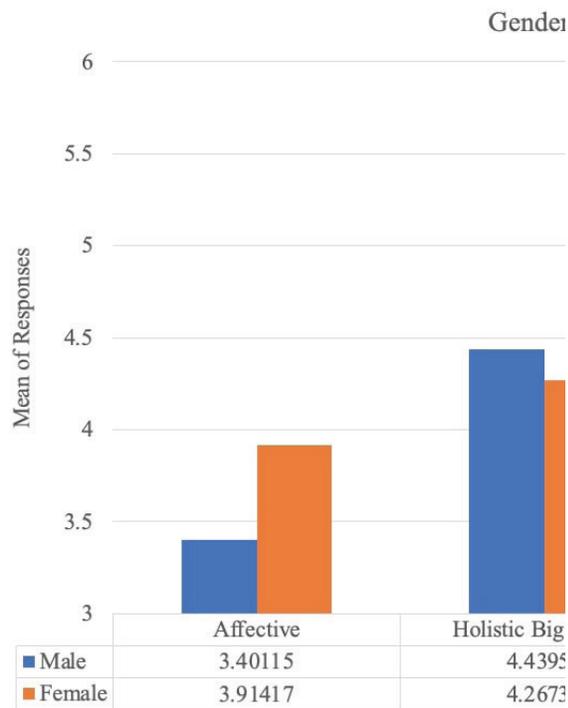
A Qualtrics survey based on the Types of Intuition Scale was distributed via email to Purdue University's undergraduate students (n = 1109) (see J. E. Pretz, J. B. Brookings, L. A. Carlson, T. Keiter Humbert, M. Roy, M. Jones, & D. Memmert, Development and validation of a new measure of intuition: Types of Intuition Scale, *Journal of Behavioral Decision Making*, doi: 10.1002/bdm

.1820). Regression analysis was used to model each intuition type: holistic big picture ( $p = 1.755 \times 10^{-4}$ ), inferential ( $p = 3.524 \times 10^{-11}$ ), affective ( $p = 2.200 \times 10^{-16}$ ), and holistic abstract ( $p = 3.195 \times 10^{-7}$ ).

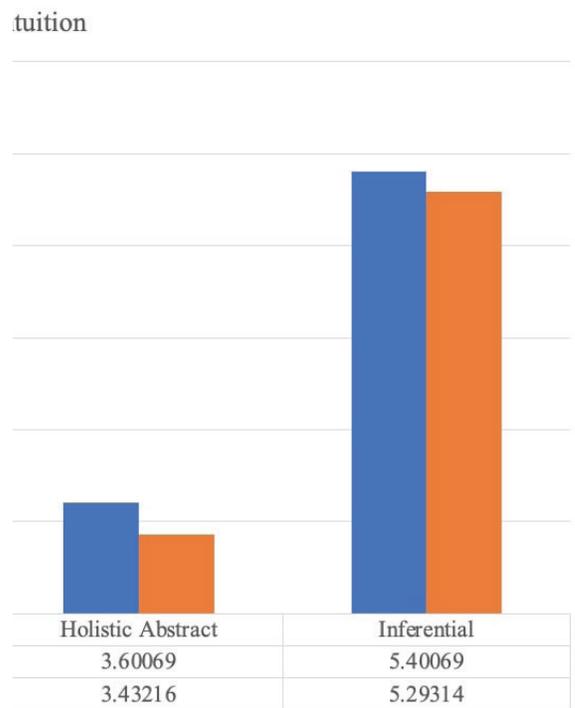
This methodology revealed that gender and college are the main drivers of holistic big-picture intuition, while gender and ethnicity were the only factors showing an impact on inferential intuition usage. Additionally, college, year of classification, gender, and ethnicity were found to be significant in the use of affective intuition. In the case of holistic abstract intuition, the main factors that influenced this intuition type were gender, college, and ethnicity.

The study suggests that all four factors have an impact on intuition usage. Data suggests gender as a key element that contributes to the use of all four intuition types. These findings bring a deeper understanding of intuition and the elements that affect its use.

*Research advisor Anne Lucietto PhD writes: "Melissa Cai Shi worked with my research group during the summer of 2019. She has worked on various publications and has authored her first conference paper. Melissa has continued a line of research that became apparent during our most recent work and showcases it here."*



*This graph shows the mean comparison of each intuition type between male and female students in the group studied. Male students have higher intuition usage compared to female students in all intuition types except for affective intuition.*



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