GroupReasoning

Embargoed registration

Metadata

Preregistration Template from AsPredicted.org

Data collection
Have any data been collected for this study already? Note: 'Yes' is a discouraged answer for this preregistration form.

It's complicated. We have already collected some data but explain in Question 8 why readers may consider this a valid pre-registration nevertheless.

Hypothesis

In this study, we ask whether children (Ages 7-10) and adults (MTurk sample) distinguish between questions that may be more accurately answered through group discussion and those more accurately answered through independent responding (“crowd”).

H1: Adults will prefer group consensus answers for questions that require reasoning or problem solving and independent “crowd poll” answers for questions of popularity.
H2: A developmental pattern will be observed whereby younger children will prefer group consensus for all question types, but older children will also prefer the group consensus for reasoning questions and crowd poll for popularity questions.

Dependent variable

In a within-subjects design, each participant will be told that “Jack” (depicted as a silhouette) has some questions, and that there are 5 people (depicted as silhouettes) available to help him. They will be told that the 5 people can help him in two ways — through “Talking Together” (group discussion), or by “Answering Alone” (independent crowd poll). Each participant will see Jack’s 8 questions: 4 questions that require reasoning or problem solving, 4 questions about the popularity of items.

For each of Jack’s questions, each participant will be asked to decide whether Jack will get more help answer from group discussion, or from a poll.

Responses will recorded on a 4-point scale: definitely no discussion, probably no discussion, probably discussion, definitely discussion.

Adults will use the scale directly. Children's answers will be staggered (binary preference followed by definitely/probably degree of preference).

The DV will be the mean of the ratings for the 4 reasoning questions and the 4 popularity questions.

Conditions
How many and which conditions will participants be assigned to?

We will use a within-subjects design: each subject will see all 8 questions, 4 of each type (reasoning, popularity).

Children ages 7-8 (40)
Children age 9-10 (40)
Adults (40)

Analyses

The mean rating by domain will be computed for each participant.

We will conduct a repeated measures ANOVA, using AgeGroup and Question Domain as predictors of the mean rating for each kind of question. One sample t-tests will be conducted to compare mean ratings for each domain to chance for each age group. Post-hoc comparisons will be conducted to test the difference in mean ratings by domain for each age group.

Outliers and Exclusions

Child participants will be excluded and replaced in case of connectivity issues with the platform, such as extreme lag, poor audio-connection, etc.
Children will also be excluded and replaced if parents interfere.

Adult participants will be required to pass an attention check after reading the initial instructions, consisting of basic comprehension questions about the instructions. Participants who fail the attention check twice will be screened out of the study.

Sample Size

A sample size of 40 participants per age group was chosen based on piloting results.

Other

Any secondary analyses?

Responses to each question will also be analyzed separately for item-level differences, but only as an exploratory measure and if necessary.

Name

Group vs Crowd Study 1 Preregistration

Finally

Experiment

Other

Some data have been collected for this study already, but have not been examined. The original preregistration mistakenly included a draft of the analysis plan with errors instead of the planned analysis. This preregistration fixes the errors, but is otherwise identical to the original preregistration.