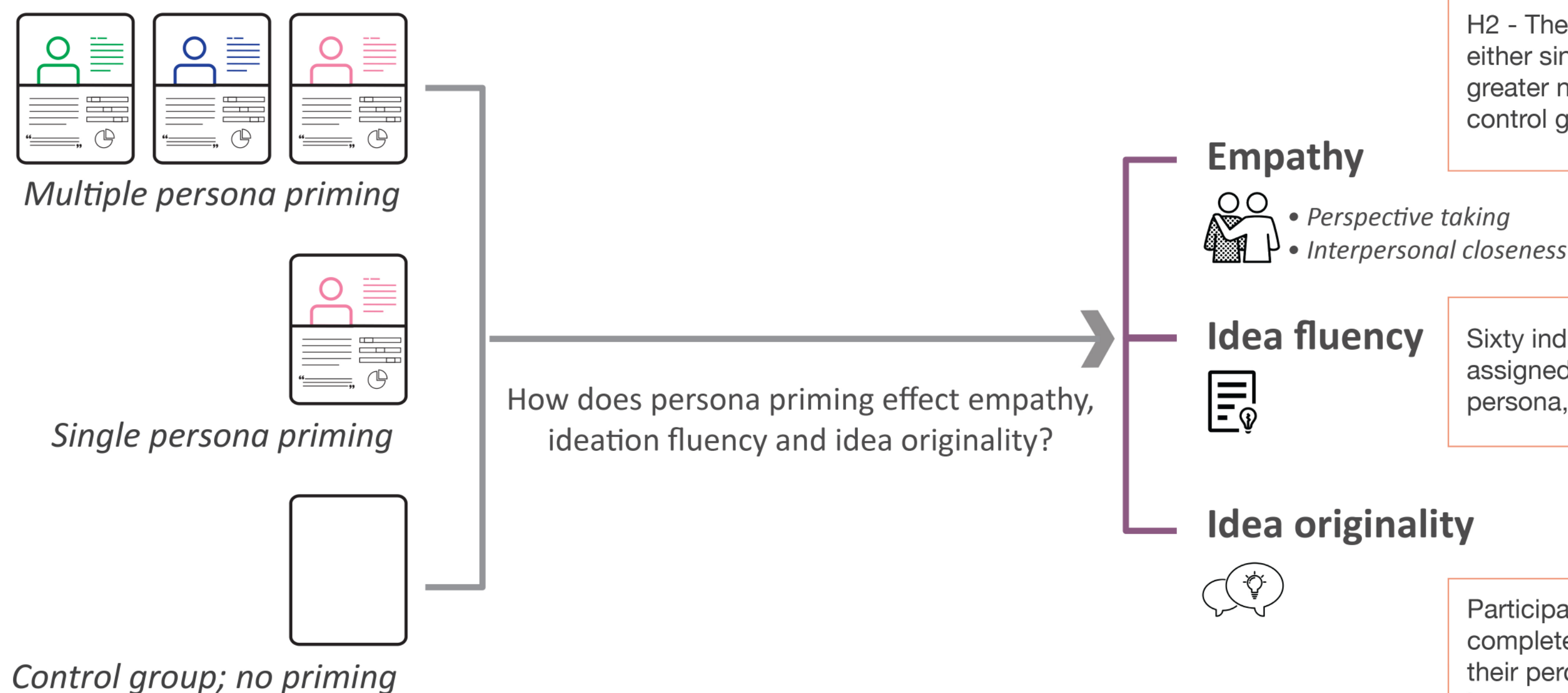


### Introduction

The purpose of this study is to measure the effect of persona priming on both ideation fluency and idea originality during brainstorming tasks. In a three between-subjects experimental design study, sixty industrial design students were randomly assigned to one of three conditions: single persona, multiple personas, and no persona. A one-way, between-subjects analysis of variance (ANOVA) revealed an overall persona priming effect on fluency and originality.

### Conceptual diagram



H1 - The group of participants primed with either a single persona or multiple personas will generate a greater number of ideas than those in the control group who were not assigned a persona.

H2 - The group of participants primed with either single or multiple personas will generate a greater number of original ideas than those in the control group.

Sixty industrial design students were randomly assigned to one of three conditions: single persona, multiple personas, and no persona.

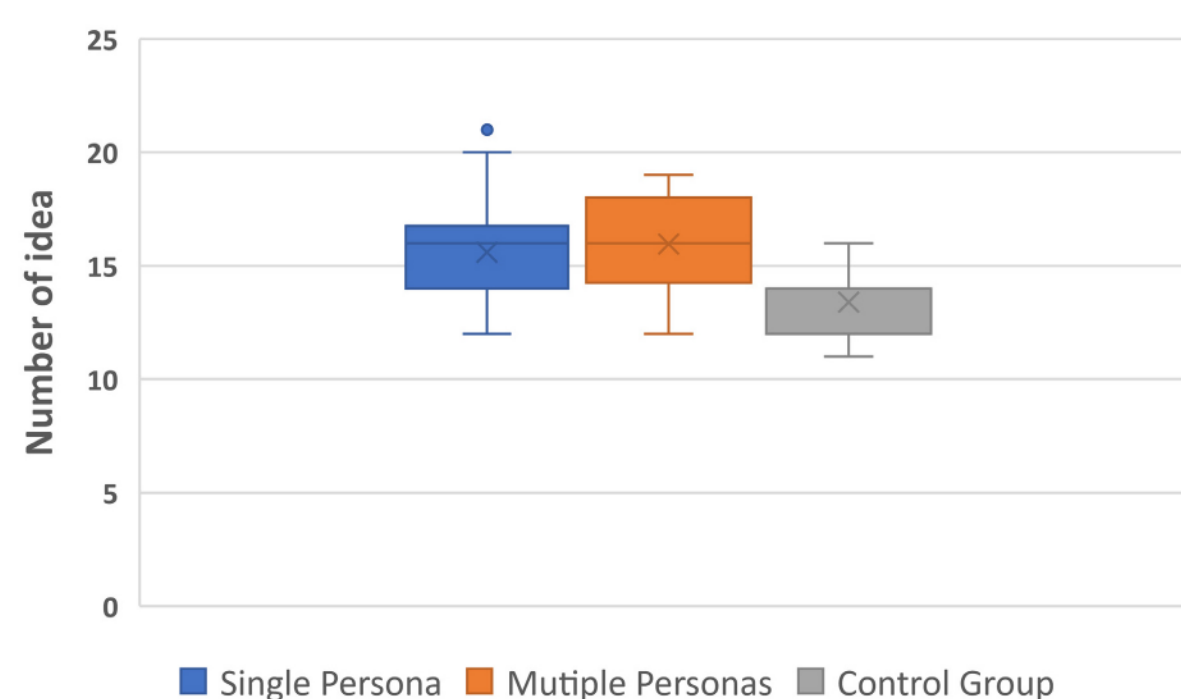
Participants generated ideas for 25 minutes and completed a short empathy survey to measure their perceived perspective taking ability and interpersonal closeness with users.

### Results

#### Idea Fluency

Participants in the single persona group (SPG) generated more ideas compared to the control group (CG) ( $M_{SPG} = 15.60$ ,  $SD_{SPG} = 2.624$  vs  $M_{CG} = 13.40$ ,  $SD_{CG} = 1.39$ ,  $p = 0.004$ ).

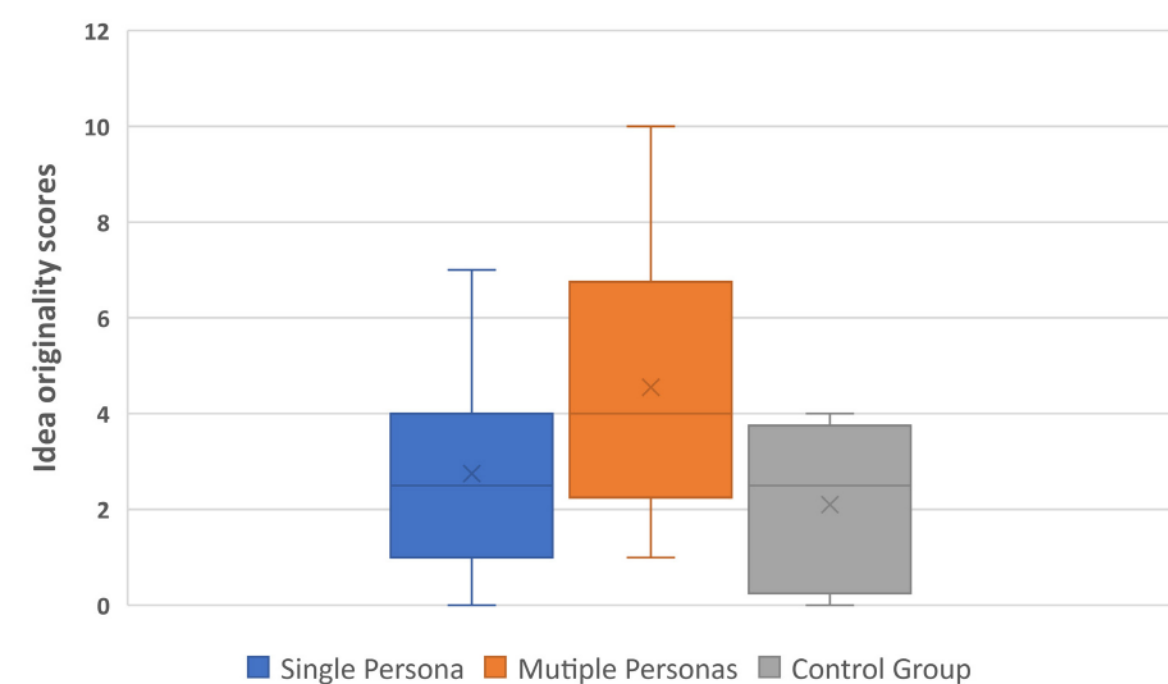
Participants in the multiple personas group (MPG) generated more ideas compared to the control group ( $M_{MPG} = 15.95$ ,  $SD_{MPG} = 2.06$ , vs  $M_{CG} = 13.40$ ,  $SD_{CG} = 1.39$ ,  $p = 0.001$ ).



#### Idea Originality

Participants in the multiple personas group generated a significantly greater number of original ideas compared to the control group ( $M_{MPG} = 4.55$ ,  $SD_{MPG} = 2.66$ , vs  $M_{CG} = 2.10$ ,  $SD_{CG} = 1.5$ ,  $p = 0.02$ ).

A large effect size (Cohen's  $d = 1.3$ ; an effect greater than 0.80 is considered significant) indicated that priming participants with multiple personas resulted in a significantly greater number of original ideas.



#### Effect of priming on empathy

##### Perspective Taking

Participants primed with personas showed no greater perspective taking ability.

##### Interpersonal Closeness

The Inclusion of Other in the Self (IOS) scale was used to measure the perceived interpersonal closeness between participants and personas. Persona priming did not result in greater interpersonal closeness.