

# CALIFORNIA STATE SCIENCE FAIR 2017 PROJECT SUMMARY

Name(s)

Mani Homafar

**Project Number** 

**S0408** 

### **Project Title**

# Working Together: The Effect of Gender on the Efficacy of Group Based Cognitive Tasks

# Abstract

# **Objectives/Goals**

The goals of this research were to determine the effect of gender on the efficacy of group based cognitive tasks, and to identify the potential existence of an age bias conducted in earlier researches.

#### Methods/Materials

20 computers, 40 teenage participants aged 15-18, 18 Verbal Reasoning test questions, 10 Spatial Reasoning test questions, and a timer were used. For the first portion of the project, I recorded individual female and male performance in the Verbal Test and Reasoning Test. For the second part of the research I recorded the difference in effectiveness between groups composed of the same gender and groups composed of opposite gender when working on a cognitive task.

#### Results

My research showed that females exhibit improved performance compared to males in both Verbal and Spatial domains. The latter half of the research showed that groups composed of the same gender were more effective at performing the cognitive task when compared to groups of opposite genders.

#### **Conclusions/Discussion**

My results indicate that there might exist an age bias in earlier researches conducted within the Verbal and Spatial domains, as earlier research indicated that males would exhibit improved performance within the Verbal test, while males would perform superior in the Spatial test. No such age bias existed in the latter half, which indicated that in general males and females are more effective at cooperating and synchronizing with others of the same gender.

## **Summary Statement**

I researched the difference in effectiveness of groups composed of the same gender and opposite genders when performing cognitive tasks.

#### Help Received

None, I recruited the subjects and conducted the experiments by myself.