CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY

Name(s)
Xulian Romano

Project Number
J0718

Project Title
Is a Picture Worth 1000 Words? Written vs. Pictorial Input

Abstract

Objectives/Goals
This project aims to test if pictorial or written input is more effective when learning a foreign language, which in the case of this experiment, was Mandarin.

Methods/Materials
In order to test this hypothesis, nine basic words in Mandarin were selected and two groups of students were trained either by being shown their English translation in written form, or being shown an image depicting their meaning. Mandarin words were presented simultaneously in spoken and written form (pinyin). The students were then tested twice, first using the method corresponding to their training to choose the meaning of the Mandarin words, and then using the other method. The tests and training were executed by showing the children a set of Quizlet flashcards and then, in a multiple choice format, testing the children on what they were trained with also by using Quizlet flashcards.

Results
At first glance, the data collected in this experiment show that the pictorial trainees performed only slightly better, but after closer examination other aspects of the data were revealed. One of these was that both groups of students generally performed better on their first test. The decrease in performance from the first to second tests with the written trainees was twice that of the pictorial trainees, which suggests the pictorial training may help retention in the longer term.

Conclusions/Discussion
The results of this experiment point towards the proposed hypothesis being partially correct, and suggest several directions for further exploration.

Summary Statement
In this project it was shown that the method of training (written vs. pictorial) does affect children's ability to learn and retain words in a new language.

Help Received
David Romano and Kings Mountain Elementary School students and teachers.