

CALIFORNIA STATE SCIENCE FAIR 2002 PROJECT SUMMARY

Name(s)

Allison G. Chin

Project Number

S1204

Project Title

How Reliable Is the Information from Computer Programs?

Abstract

Objectives/Goals

The objective is to determine if the computer program, "Brain Works," tells the subject whether he/she is an auditory or visual learner.

Methods/Materials

Informed consent was received from twelve students in the eleventh grade who were sixteen-years-old. The #Brain Works# program was provided for free by Synergistic Learning Incorporated. This program consisted of a series of twenty questions, which the computer would use to determine the percentage that the subject was an auditory or visual learner. The program also informed the subject whether they were more dominant in their left brain, or right. To test the accuracy for this program, there were a series of #observed# tests that were administered. The two tests, observed auditory and observed visual told the subject whether they were dominant in the auditory or visual area. An #observed auditory# and a #visual observed# score was then given to the subject.

Results

The Pearson#s Product Moment Correlation Coefficient was used to show if there was a direct linear relationship between the data sets. The r-value of the auditory data sets was .1836, while the r-value of the visual data sets was -.753.

Conclusions/Discussion

Since only an r-value close to 1 suggests a direct linear relationship, there are not direct linear relationships shown in either the auditory or visual data sets. Therefore, the research hypotheses: [1) If the auditory computerized results and the auditory observed results are the same, then the computer program is accurate and reliable. 2) If the visual computerized results and the visual observed results are the same, then the computer program is accurate and reliable.] were rejected. Thus, the computer program was not very accurate or reliable. The null hypothesis that the computer program is not accurate and reliable, and the computer results are different from the observed, was not rejected.

Summary Statement

The purpose of this project is to determine if the computer program, "Brain Works," tells the subject whether he/she is an auditory or visual learner.

Help Received

My senior research teacher helped set deadlines for the science fair report.