

CALIFORNIA STATE SCIENCE FAIR 2007 PROJECT SUMMARY

Name(s)

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Project Number

S0307

Project Title

Memory Lane: A Visualization Study on Short Term Memory

Abstract

Objectives/Goals

In the advertising world, people are presented with thousands of products through the various media. This project is an experiment in visualization to see how well short-term memories capture and process quick, random views of certain images of items through the timed viewing of such images and if the items remembered may be based on a personal interest in an item or, perhaps, based on an interest in the item itself. This project also tests in what kind of environment people will remember most objects.

Methods/Materials

Random, every day objects were chosen and then printed and pasted onto a black poster board. The pictures were non-biased towards any group of people. Forty-two people, age range of fourteen to eighteen years, were tested with about half tested in a quiet library to simulate an environment similar to being at home watching television and having visual cues presented to them. The other half of the sample group was tested in a noisy cafeteria to simulate a busy city with billboards all around. Each person got one minute to look at the poster board with no further information on why looking at it. Then they were given a minute to write down all the objects that they remembered. After the minute was up, they were asked to answer nine questions that would help determine why they remembered what they remembered. The data gathered was diagramed and graphed to chart the objectives of the project.

Recults

Of all objects remembered, 65% were large pictures, while 35% were small pictures. Of all objects remembered, 68% were colored pictures, while 32% were black and white pictures. The black background helped 52% of the people tested remember the colored pictures. 20% of all people tested thought the environment they were in was distracting; however, on an average, these people remembered just as many objects as those who thought they were not being distracted by outside disturbances. Nonetheless, the 86% of the people tested tended to remember the objects that are of a personal interest to them. This is because the memory of the interesting objects, through familiarization or exposure, gets transferred from short term to long term memory.

Conclusions/Discussion

It is easier for a person to memorize bright colorful objects that are of interest to that person when they are in a quiet room with little disturbances.

Summary Statement

The students constructed a poster board and tested forty-two people to find out how well pictures of objects could be remembered and what it is that attracted people to certain objects.

Help Received

None, other than the volunteers agreeing to be tested.