

CALIFORNIA STATE SCIENCE FAIR 2012 PROJECT SUMMARY

Name(s)

Casey M. Campos

Project Number

S0406

Project Title

Will Using Natural Environment Teaching Methods Improve the Transferability of Learning for Students with Autism?

Abstract

Objectives/Goals

The objective of my project was to discover if Natural Environment Teaching (NET) is more effective than traditional Discrete Trial Teaching (DTT) methods used to educate children on the autistic spectrum.

Methods/Materials

I contacted the Central California Autism Center at the local university, met with the project coordinator to discuss this project, and then learned how to collect data on the trials. The Center provided a station with bean bags, rugs, balls, books, toys, etc. for NET, and a DTT station with a desk, chairs, and flashcards for one-on-one learning between therapist and student.

I focused on three students with similar learning needs, and therapists individually taught them the objectives using methods according to whether they were in a NET or DTT station; students spent 30 minutes at each station.

As therapists conducted trials, I observed and collected data in my logbook which indicated correct, incorrect, or prompted responses. I collected data for 11 days over a two-month period then compiled and analyzed it. In addition, I compared my data to therapists' data to further support my findings.

Results

The more effective teaching method was NET which had better results over DTT for two of the three students. The average number of correct NET responses from my data was 82.8% out of 232 trials, and the average from the therapists' data was 82% correct responses out of 1,215 trials. The average number of correct DTT responses from my data was 79.9% (388 trials) and from the therapists' data was 78% correct responses (1,558 trials).

Conclusions/Discussion

The NET methods were more effective than traditional DTT methods. My project contributes data to support that autistic children are more receptive to NET methods and that they are more successful in their ability to generalize and transfer knowledge. It is also important to note that there was a dramatic difference in the children's behavior at each station, with several tantrums occurring in the DTT station.

Summary Statement

My project compares traditional discrete trial teaching (DTT) and natural environment teaching (NET) methods to discover if NET will improve generalization and transferability of learning for children on the autistic spectrum.

Help Received

Observed at Autism Center at CSUF under the supervison of Kellee Chi/Dr. Adams; Parents helped with display