



Knowledge Gains and Participant Self-Assessment Ratings

Excel Beyond the Bell – San Antonio

EFFICACY STUDY

An Analysis of Pilot Test Results—Knowledge Gains and Participant Self-Assessment Ratings

Excel beyond the Bell–San Antonio (EBBSA) comprises nonprofit and public agencies providing Out-of-School Time (OST) or related services to youth and their families. Its purpose is to pursue avenues for joint action and planning among these and other willing partners to communicate, cooperate, coordinate and collaborate in pursuit of our share vision for San Antonio youth.

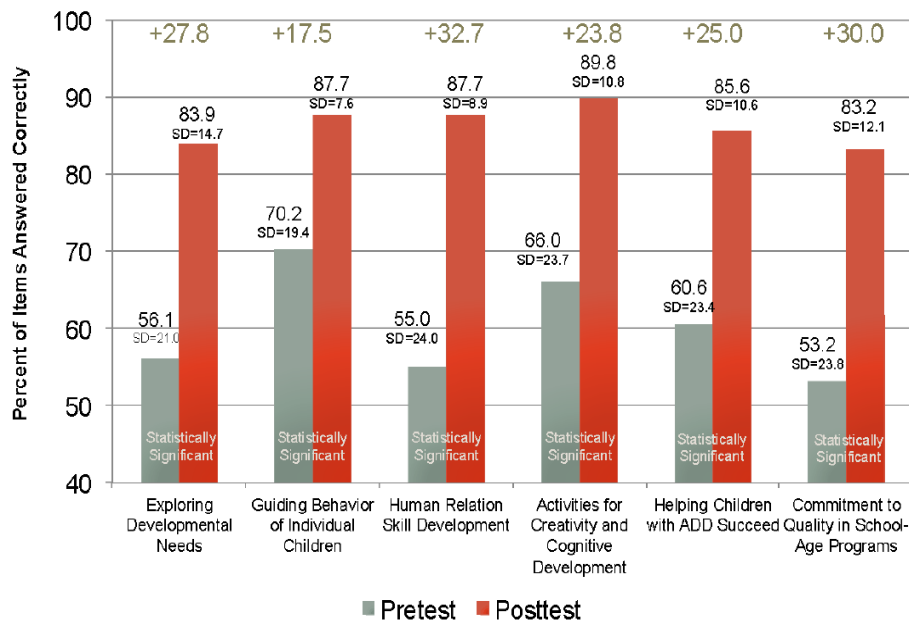
This Efficacy Study

Between two and five participants at each school-age childcare provider served by San Antonio SPARC were asked to participate in this efficacy study. The participants were chosen to represent a wide range of experience—from new hires to seasoned professionals, from those with high school/GED education to those with Masters or Doctoral Degrees, and include participants from front-line staff to Director level, and from organizations of varying sizes.

A total of 147 people completed all of the course materials, pre- and post-test and surveys and were therefore included in the analysis. Dr. James Marshall, an expert in e-learning and faculty member at San Diego State University, received the full data set collected by CypherWorx. He then conducted a topline analysis of participant test performance and survey item responses. This document summarizes Dr. Marshall’s analysis of the provided dataset.

Key Findings

Participants realize content knowledge gains between 17.5 and 32.7 points—all differences prove statistically significant.



Gains in knowledge were recorded for each of the six tested courses. Average gains ranged from a low of 17.5 percentage points, to a high of 32.7 percentage points. In all cases, the difference between pre- and posttest means was statistically significant—indicating little to no probability that the observed mean differences were the result of random chance ($p = .000$ in each case).

While pretest scores varied considerably among the six courses, mean posttest scores all clustered in the 80% range—between 83.2% and 89.8%. This indicates a high degree of mastery, regardless of the individual's performance level when the course began.

Participants achieve consistently high posttest scores—regardless of pretest performance

Participants raised their performance from pre- to posttest for each of the six courses. In addition, the variance across participant scores was effectively reduced. Upon posttesting, participants possessed greater knowledge of the content—and the range between the highest and lowest test score was significantly reduced.

For example, the Human Relations Skill Development course (Course 8) pretest scores averaged 55.0% with a standard deviation of 24.0 points. The wide distribution in Course 8 Pretest illustrates this range of performance. After completing the e-learning module, the posttest average score was 87.7% with a standard deviation of 8.9. Posttest scores are closely clustered around the higher posttest mean.

Similar growth patterns, including this reduction in range of participant pre- and posttest scores, were noted for each of the remaining five courses.

Posttest scores proved consistent, regardless of potential demographically-based variable influences

Using ANOVA procedures, scores were analyzed for potential differences based on demographically-based categories—including age, formal education, years in the profession and computer skills.

While performance on the pretest did vary—sometimes in statistically significant ways, based on key demographics, posttest scores proved consistent, regardless of potential demographically-based advantages and/or disadvantages. Thus, in all but one case, age, education, years in the profession and computer ability did not influence a student's ability to score high on the posttest. The exception was a significant difference between 30-39 and 40-49 year olds on a single posttest (Course 28).

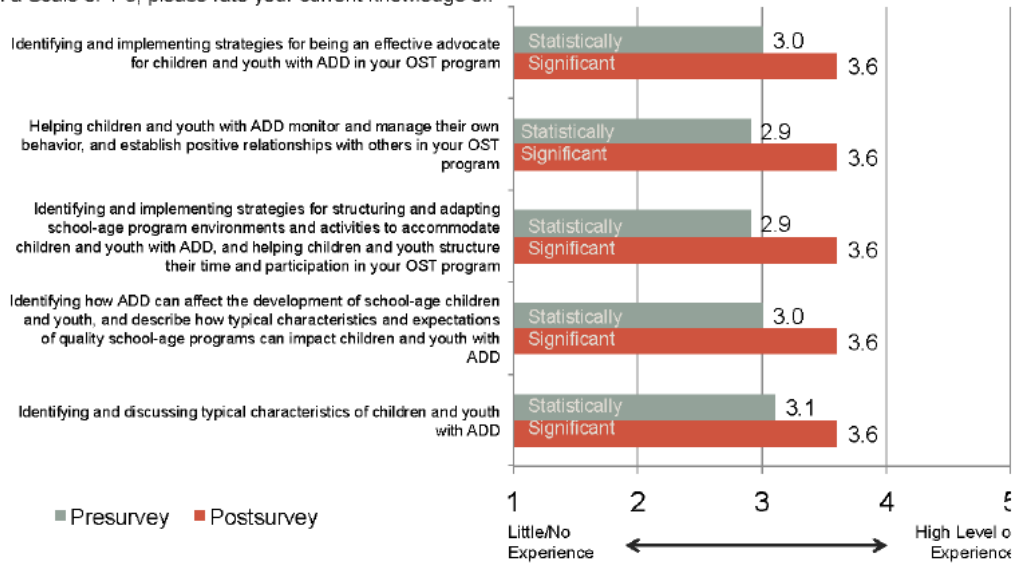
Participants indicate increased levels of experience following e-learning courses

Participants were asked to indicate their levels of experience specific to key course content prior to, and following completion of the six courses. All postsurvey ratings were higher, relative to presurvey ratings, save a single item where the pre- and post-survey means were identical. For 22, of the 27 items presented to participants, the participant-indicated growth was analyzed to be statistically significant (Paired t- Test procedure), indicating little to no chance the observed difference resulted from random chance.

The accompanying figure illustrates pre-to-post-survey increases in experience ratings for Course 24, *Helping Children with ADD Succeed in School-Age Programs*.

Mean Participant Ratings

On a Scale of 1-5, please rate your current knowledge of:



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