



# San Diego Zoo Global Academy Online Training

An Efficacy Study of Knowledge Gains and Attitudinal Outcomes

San Diego Zoo Global Academy is a powerful online learning platform that harnesses the expertise of San Diego Zoo Global and its partners to offer courses that meet the specific needs of individuals in the zoological profession. Using compelling, relevant content, the Academy immerses learners in the subject matter, presents challenging and thought-provoking material, and guides learners in a creative and engaging manner as they build professional skills.

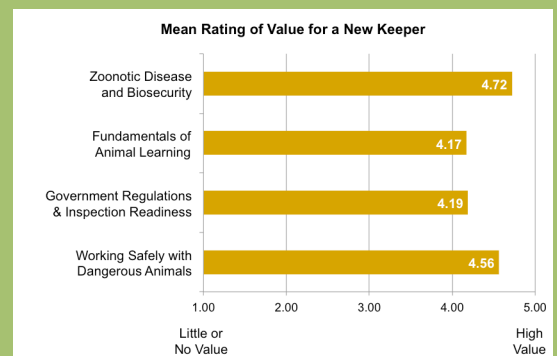
## This Study

An evaluation was conducted to assess the efficacy of the Academy training. The study involved the first four animal care courses. Professionals from four organizations across the United States served as the study participants.

A total of 155 individuals completed one or more of the Academy courses. Pre- and posttests, aligned with each course’s designated outcomes, were administered just prior to, and immediately following, training. A follow-up assessment was also administered to a smaller group to gauge knowledge retention.

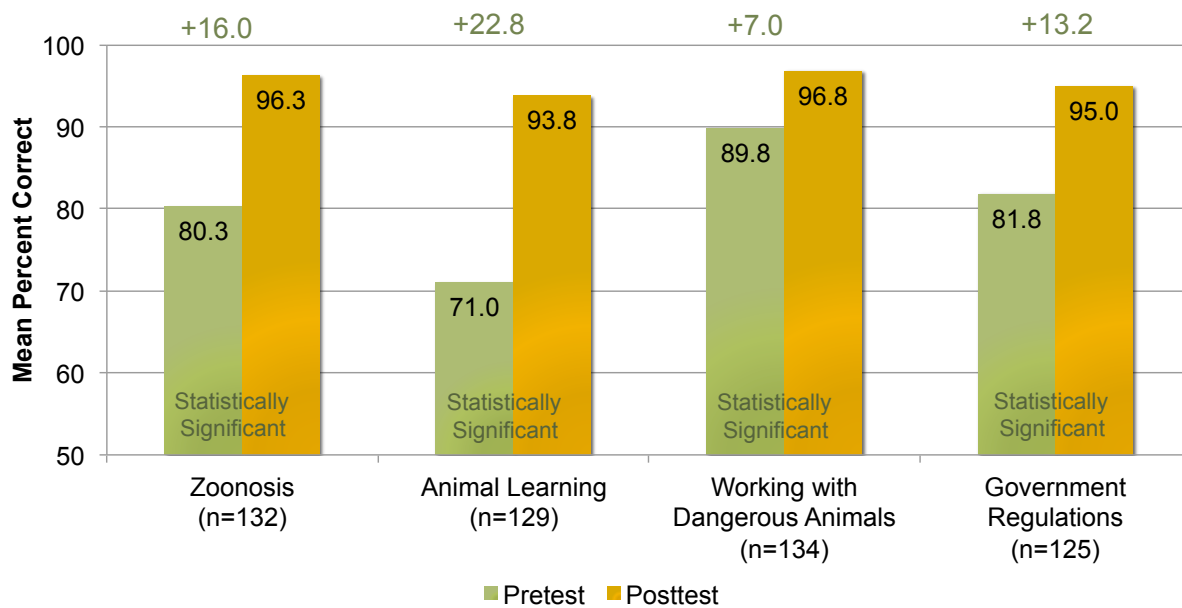
## Animal Care Academy Courses: High Value to Keepers

Course topics were selected for their broad applicability to zoos, parks, and aquariums. This pilot involved the first four animal care courses. Participant responses confirmed the relevance of these topics. When asked to rate the value of each course for a new keeper, the following results were recorded.



## Key Findings

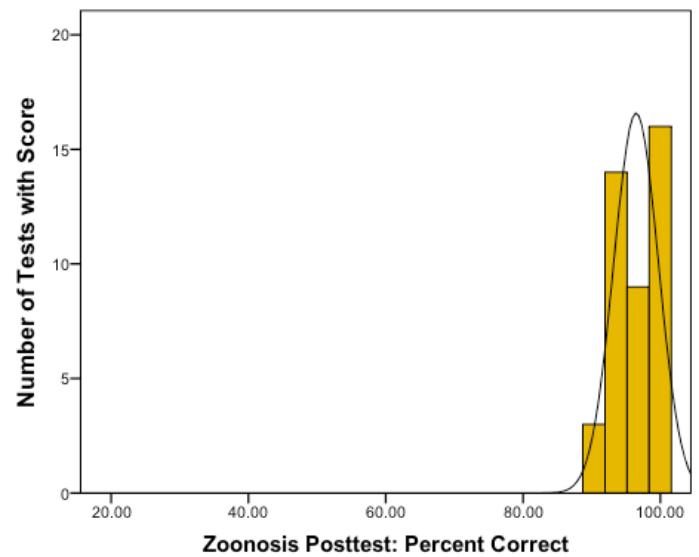
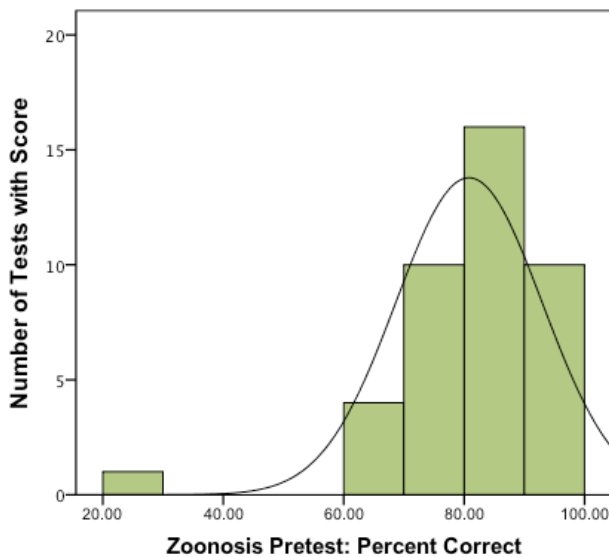
### 1. Animal Care Personnel Increase Knowledge and Demonstrate Consistent Mastery of Content



Gains in knowledge were recorded for each of the four tested courses. Average gains ranged from a low of 7 percentage points, to a high of almost 23 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 (significance varied between  $p \leq .004$  —  $p \leq .000$ ).

While pretest scores varied by course, recorded posttest score means all clustered in the mid-90% range—between 93.8% and 96.8%. This indicates a high degree of mastery, regardless of the individual’s performance level when the course began.

## 2. Participants Achieve Consistently High Posttest Scores—Regardless of Pretest Performance



For each of the four courses, participants raised their performance from pre- to posttest. 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, Zoonosis course pretest scores averaged 80.3% with a standard deviation of 9.5 points. The wide distribution in the first figure (Zoonosis Pretest) illustrates this range of performance. After completing the Zoonosis course, the posttest average score was 96.3% with a standard deviation of 3.4. The second figure (Zoonosis Posttest) illustrates the posttest scores which are clustered more closely, 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 four courses.

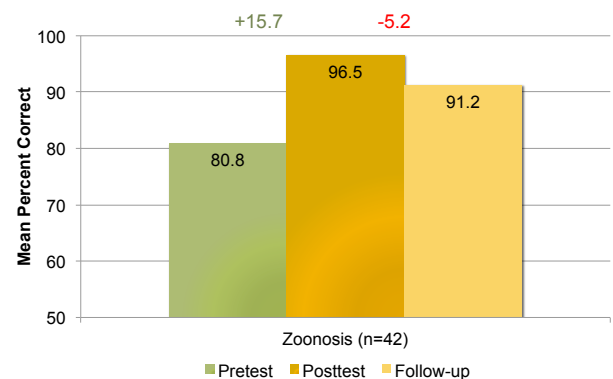
## 3. Participants Retain 67% of Their Gained Knowledge 90 Days Later

Retention of learned skills and knowledge over time is an equally important factor for determining the efficacy of the Academy courses. Forty-two of the original participants completed a follow-up test for the Zoonosis course 90 days after posttest administration.

Results indicate that, following an initial gain of 15.7 percentage points and achieving a posttest mean of 96.5%, students maintained 10.4 of the original gain. The differences between the pre- and posttest, and pretest and follow-up scores were statistically significant ( $p < .000$ ).

This equates to retention of 67% the gained knowledge, relative to posttest performance.

### Pre- and Posttest, and 90-day Follow-up Scores



## 4. Participants Favor Online Learning for Professional Development

Participants gave the full range of course components high marks. In particular, these learners favored the real-world video case studies featured in each course. On average, participants believed that they had learned each course's content—suggesting confidence with the subject matter.

The majority of participants indicated a willingness to complete additional online training. This proved true regardless of the learner's age. In fact, the older, more experienced participants indicated a greater desire to engage in online learning and a greater enjoyment of the online learning experience.

### Mean Participant Ratings of Course Experience

