Spencerport CSD & CypherWorx Paraprofessional Pilot Study: Data Analysis Results

Summary of Data Analysis Findings

June, 2023

CYPHER**WORX.**

Background

This Efficacy Study was conducted in collaboration with Spencerport Central School District (CSD). Spencerport CSD is a Public School District in New York, serving approximately 3,605 students across elementary, middle, and high school. The district has approximately 346 FTE teachers, and 116 FTE instructional aides (paraprofessionals).

The purpose of this study was to assess the effectiveness of six e-learning courses tailored for paraprofessionals. The training study was conducted on the final day of school, June 20, 2023. The participants took the online courses, and survey, as part of their professional learning day. The diverse pool of participants encompassed individuals with varying levels of experience, including new hires, seasoned professionals, individuals with high school/GED education, and those with higher degrees.

A total of 43 participants successfully completed the six e-learning courses along with pre- and post-surveys. CypherWorx collected and analyzed the comprehensive dataset, evaluating participant test performance and survey responses. This document summarizes the key findings and insights derived from the comprehensive analysis.

The collaborative effort between Spencerport Central School District and CypherWorx in conducting this study reflects our commitment to enhancing paraprofessional training and ensuring the delivery of impactful and effective e-learning experiences.

List of Courses Tested

Data was collected for six paraprofessional e-learning courses. The involved data included:

- **Pre- and posttest scores—**based on answers to test items aligned with each course's objectives. The *Objective Measures* section of this document summarizes test results.
- **Post-survey responses—**from a survey conducted with participants following completion of the final course. The *Participant Beliefs* section of this document summarizes survey results.

Spencerport selected the following e-learning courses for this study:

| Course	Title
1	Creating and Maintaining Healthy and Safe School Environments
2	Health and Stress Management for Paraprofessionals
3	Human Relations Skill Development: Leadership Styles and Conflict Management for Paraprofessionals
4	Positive Behavior Interventions and Supports (PBIS)
5	Response to Intervention (RTI)
6	Behavior Management for Paraprofessionals

PARTICIPANT DEMOGRAPHICS

Information describing the 43 pilot study participants

Demographics: Gender

Study Participants
(n=43)
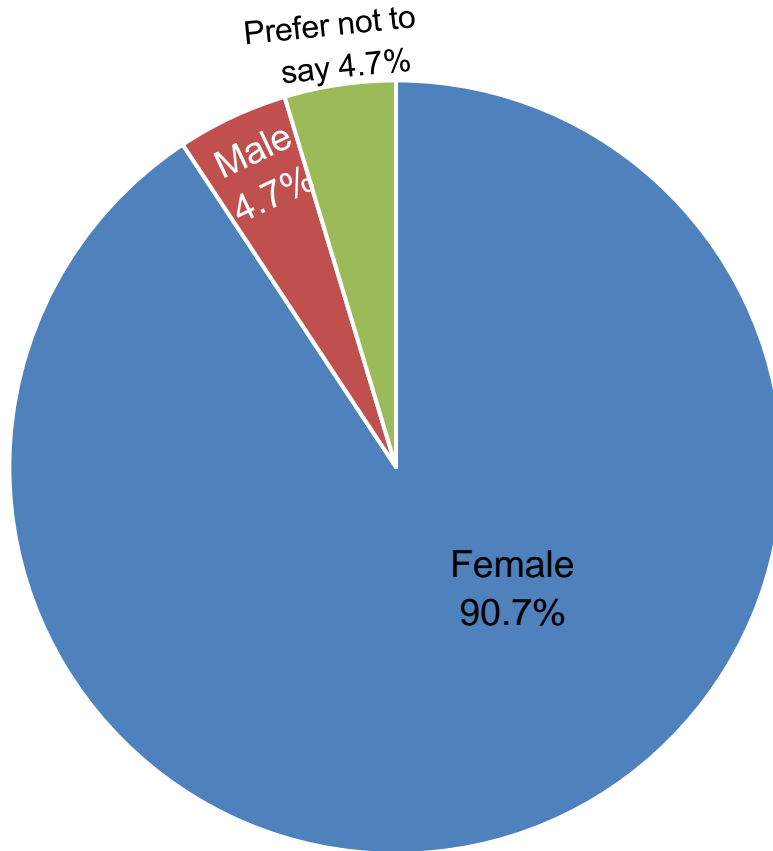
■ Female (including transgender women)
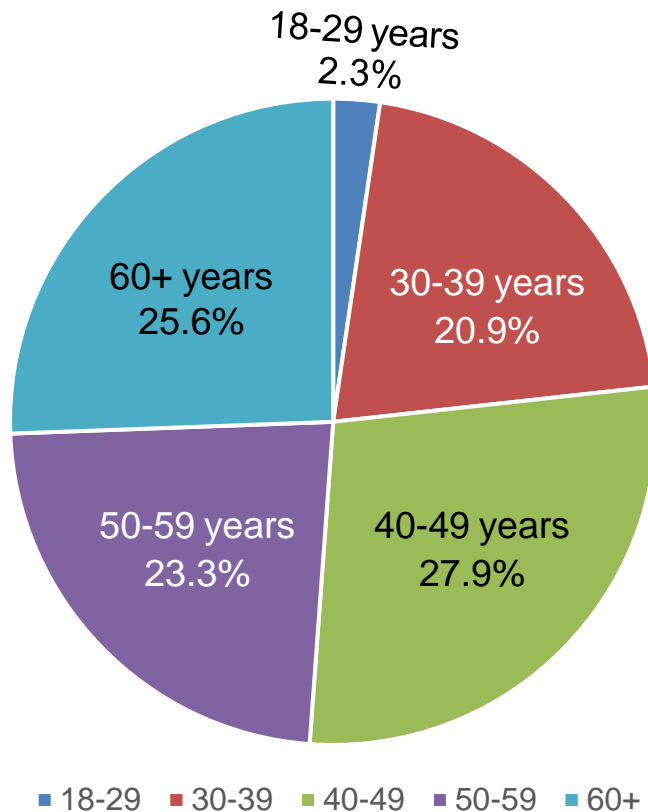■ Male (including transgender men)
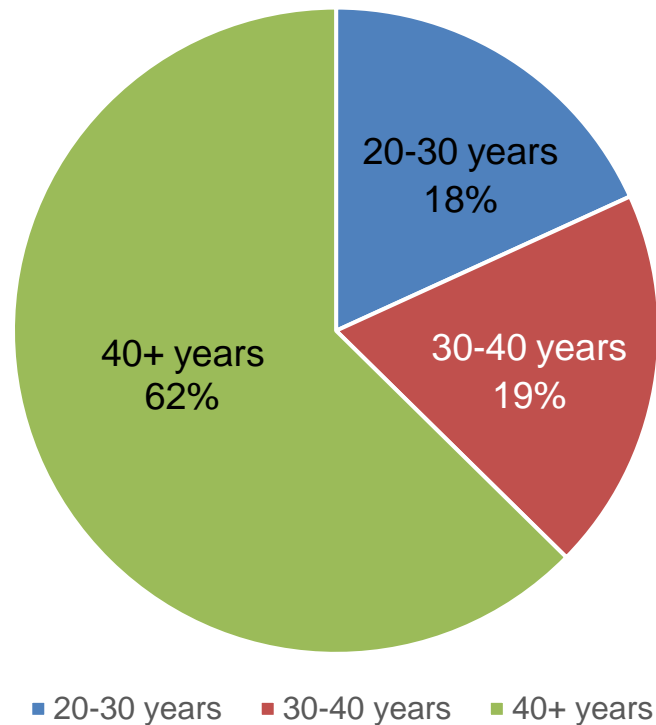■ Prefer not to say
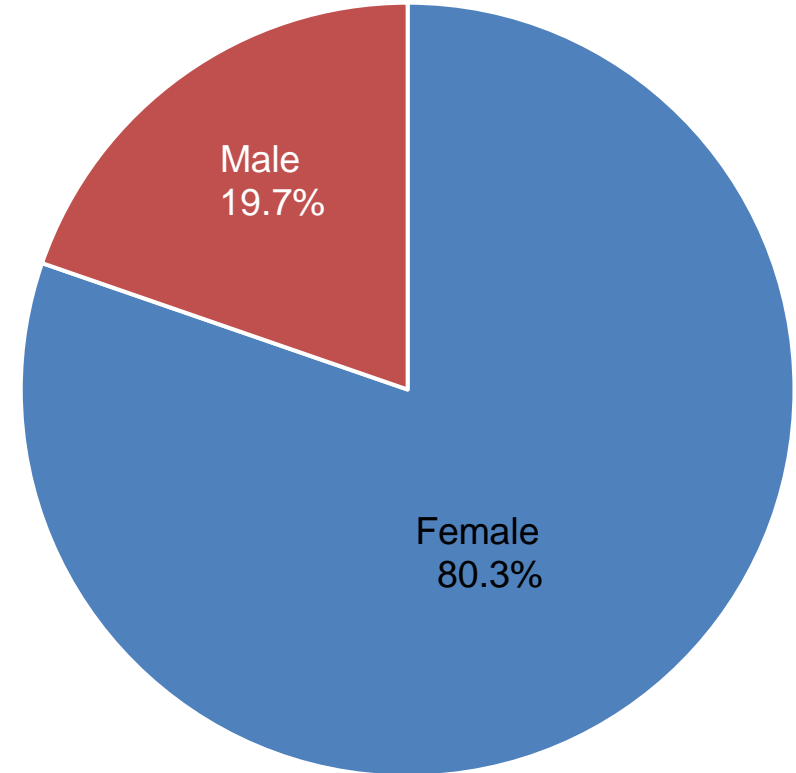
National Averages For Field*

■ Female ■ Male

*Source: Education Paraprofessional Demographics and Statistics in the US (Zippia, 2023)

Demographics: Age

Study Participants
(n=43)

National Averages For Field*

*Source: Education Paraprofessional Demographics and Statistics in the US (Zippia, 2023)

Demographics: Education

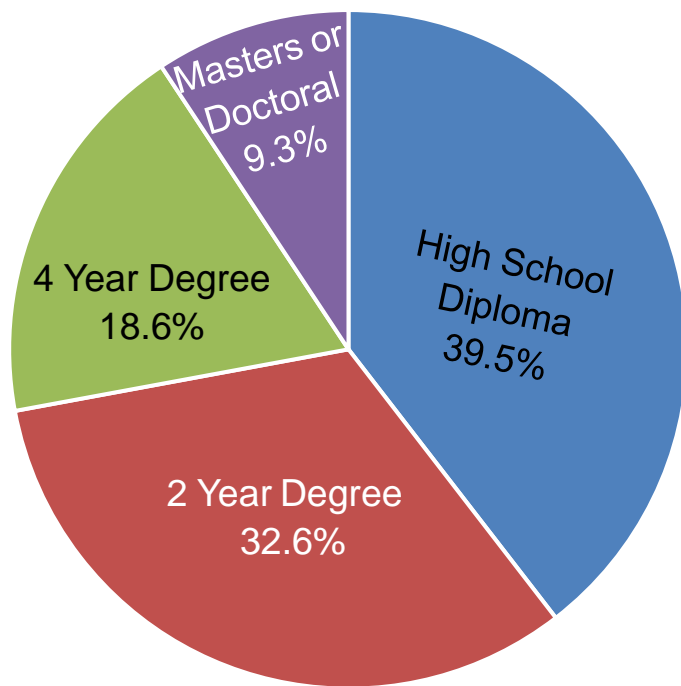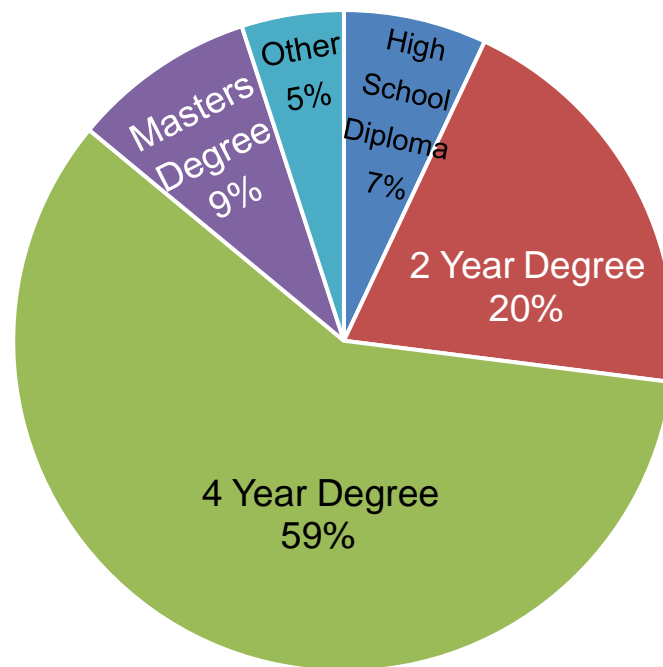**Study Participants**
(n=43)

National Averages For Field*

Source: Education Paraprofessional Demographics and Statistics in the US (Zippia, 2023)

Demographics: Paraprofessional Experience
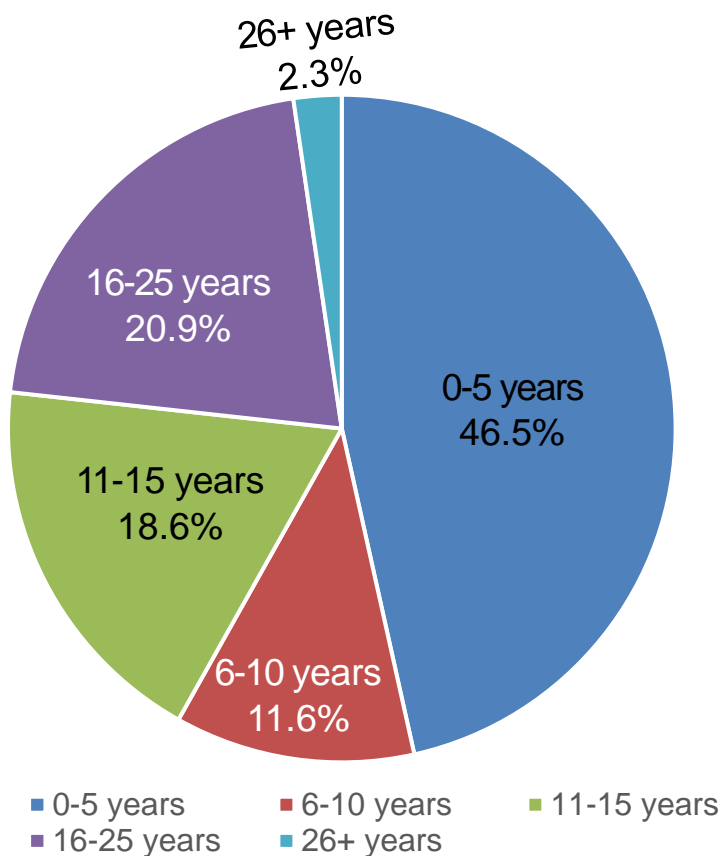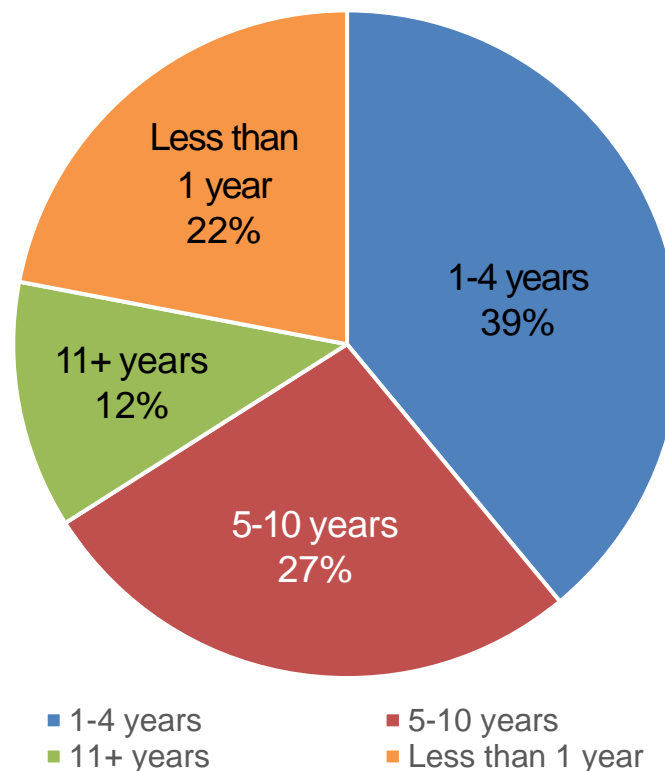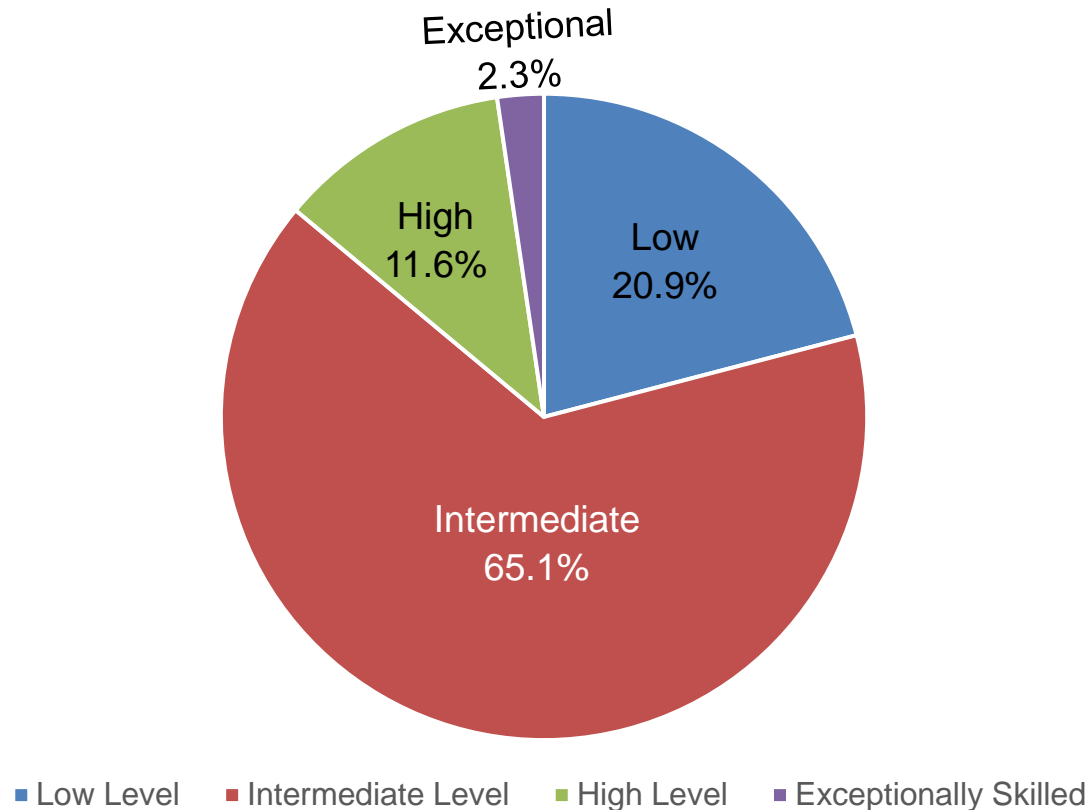

Study Participants
(n=43)

National Averages For Field*

*Source: Education Paraprofessional Demographics and Statistics in the US (Zippia, 2023)

Demographics: Computer Skills

Study Participant Self-rating:
How would you rate your level of Computer / Technical experience?
(n=43)

OBJECTIVE MEASURES

A comparison of pre- and posttest performance to determine growth as a result of instruction

Pretest to Posttest Comparisons

Each course in this pilot includes a pre- and posttest instrument. Aligned with the course objectives, these tests were used to assess participant knowledge prior to, and following completion of, each course.

This analysis uses mean scores to analyze differences in pre- and posttest performance.

Pretest to Posttest Gains
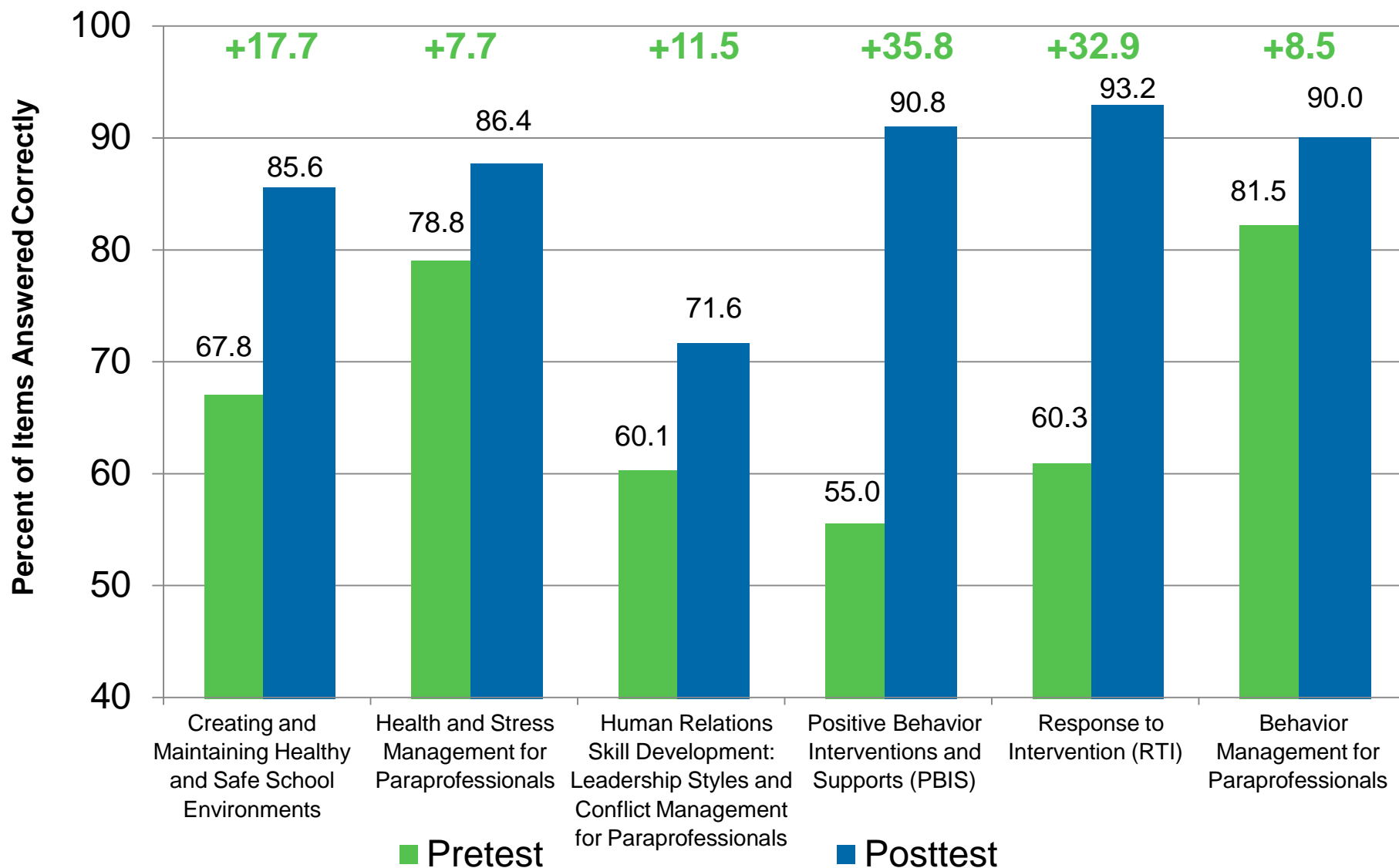
Pretest to Posttest Gains

On average, participants increased their knowledge in each of the six courses.

We conclude the difference (growth) is attributable to the intervention (in this case, the training provided to participants).

Pretest to Posttest Gains

Course	Pretest: Mean Score	Posttest: Mean Score
Course 1	67.8	85.6
Course 2	78.8	86.4
Course 3	60.1	71.6
Course 4	55.0	90.8
Course 5	60.3	93.2
Course 6	81.5	90.0

- From the pretest to the posttest, learners gained between 10 to 65 percentage points, showcasing their increased understanding and mastery of the course content.

- 31% gain on the average of the six courses taken during the study. This impressive overall improvement underscores the effectiveness of the e-learning approach in enhancing knowledge and skills among paraprofessionals.