

Pittsford CSD & CypherWorx Paraprofessional Efficacy Study: Data Analysis Results

Summary of Data Analysis Findings

January 15, 2024

Background

This Efficacy Study was conducted in collaboration with Pittsford Central School District (Pittsford CSD). Pittsford CSD is a Public School District in New York, serving approximately 5,500 students across elementary, middle, and high school. The district has more than 1,150 employees. Pittsford CSD schools are consistently ranked among the top schools according to US News and World Reports ([Pittsford CSD Accolades](#)).

The purpose of this study was to assess the efficacy of CypherWorx courses for paraprofessionals. The training study was conducted on December 18, 2023. The participants took the online course, then attended an in-person session, making this a hybrid training. 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.

There were 21 adult learners who started this study. There were 2 participants who completed the pre-survey and pre-test, attended the live training session, but never finished the post-test nor the post-survey for the course. A total of 19 participants successfully completed the full hybrid course 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 Pittsford Central School District and CypherWorx in conducting this study reflects our commitment to enhancing paraprofessional training and ensuring the delivery of impactful and effective eLearning experiences.

eLearning Course - Building Relationships with Students for Paraprofessionals

Course Goals:

- 1 To understand the importance of taking the time to build positive relationships with students.
- 2 To explore tips, techniques, and activities to help paraprofessionals build relationships with students.

Learning Objectives:

- Identify characteristics and attributes that help paraprofessionals build relationships with students.
- Reflect on personal characteristics and attributes as a paraprofessional.
- Identify the elements of a safe and supportive classroom.
- Describe the importance of self-reflection in building relationships with students.

Think About It!

Think about an adult in your life, other than a parent, who held you in high regard. That person may be a coach, teacher, or paraprofessional. Once you have that person in mind, reflect on the questions below. Take at least 5 minutes to respond to all of them. Use the response box to record your answer.

NOTE: This is an exercise to help you think and reflect on your own situation by putting it in words. Anything you type in the box will not be stored and cannot be referenced by anyone later.



How did you know that person cared about you?

Enter your response here

Duration: One Clock Hour

Live Training Course

What does it *look like* and *sound like* when adults are effectively building relationships with students?



Duration: One Clock Hour

Participants attended a one-hour live training course led by the Director of the Pittsford CSD Teacher Center utilizing generally accepted Constructivist and ARCS Model learning theory approaches.

During the one-hour session participants worked in small groups, and as a whole, to develop personalized plans for implementing learning objectives into actionable classroom strategies. Three worksheets were provided to participants to assist them with reflections and action planning.

Live Training Course Handouts

Participants completed three handouts as part of the training. The handouts assisted them in developing plans to implement long-term strategies for improving relationships with students during the eLearning Module, live training, and closure activity.

3-2-1

Connect, Extend, Challenge

3

strategies that help build positive relationships with students:

How was this information connected to what you already know about building relationships with students?

What new ideas/information did you get from the learning?

What questions or challenges came to mind as you were working through this module?

2

reasons why building positive relationships with students is important:

1

thing I am committed to do moving forward:

Handout 1 – Used by Participants During Live Training

Handout 1 – Closure Activity

Live Training Course Handouts

Participants completed three handouts as part of the training. The handouts assisted them in developing plans to implement long-term strategies for improving relationships with students during the eLearning Module, live training, and closure activity.

Building Relationships with Students for Paraprofessionals: Note Catcher

As a result of this asynchronous activity, participants will be able to:

- Identify characteristics and attributes that help paraprofessionals build relationships with students.
- Reflect on personal characteristics and attributes as a paraprofessional.
- Describe the importance of self-reflection in building relationships with students.
- Identify techniques and activities to build relationships with students.

Use this note catcher to capture important ideas and information from the module if you choose.

Interactions with Adults

Why is it important for students to have positive interactions with adults? What are some examples of positive student to adult interactions?	
The Four Domains of Development: briefly describe each one.	Physical
	Social
	Emotional
	Cognitive

Positive Characteristics and Attributes

Which of the characteristics and attributes listed do you feel are most important? Why?	
Self-Reflection: What are your strengths and weaknesses in this area? How can this information help you in your work with students?	
Are there characteristics other than the ones listed that you feel are important? If so, which ones and why?	

Positive Relationships

What are specific ways paraprofessionals can build positive relationships with students?	
--	--

Reflection Questions

Why is it important to build relationships with the students with whom you work?	
What skills or strategies will you use to support relationship building?	

Handout 3 – Used by Participants During eLearning Module

Data Collection

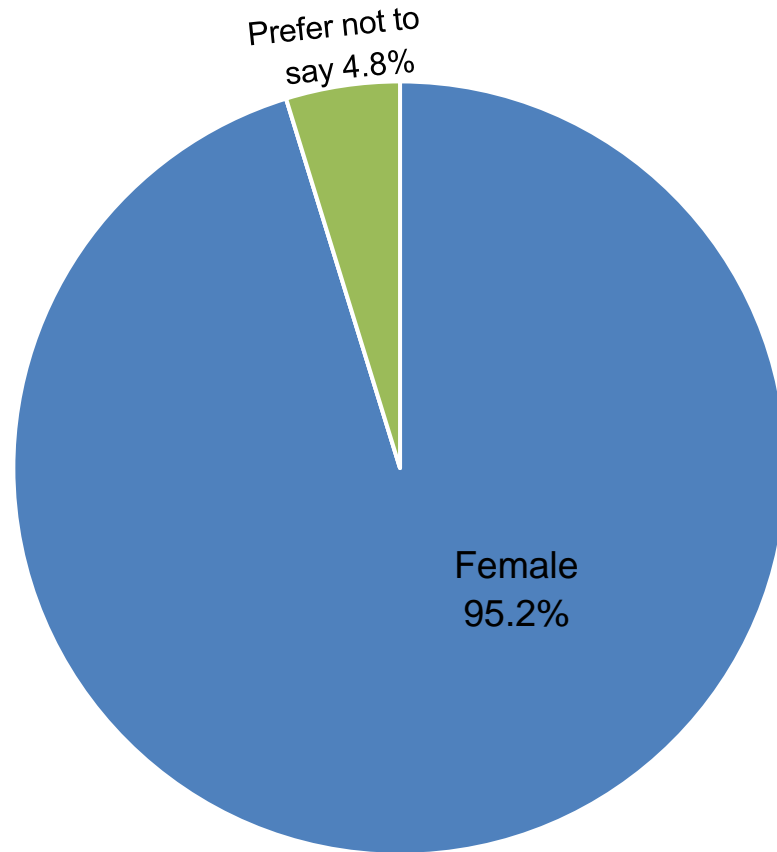
Data was collected for the paraprofessional eLearning course. The involved data included:

- **Pre- and posttest scores**—based on answers to test items aligned with the 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.

PARTICIPANT DEMOGRAPHICS

Information describing the 21 pilot
study participants

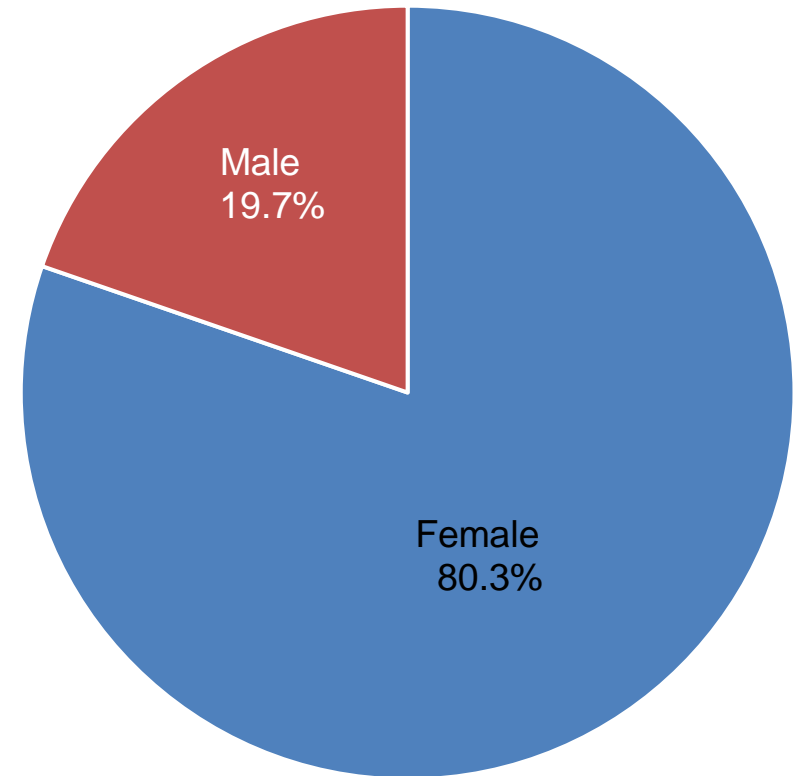
Demographics: Gender



Male 0%

- Female (including transgender women)
- Male (including transgender men)
- Prefer not to say

Study Participants
(n=21)

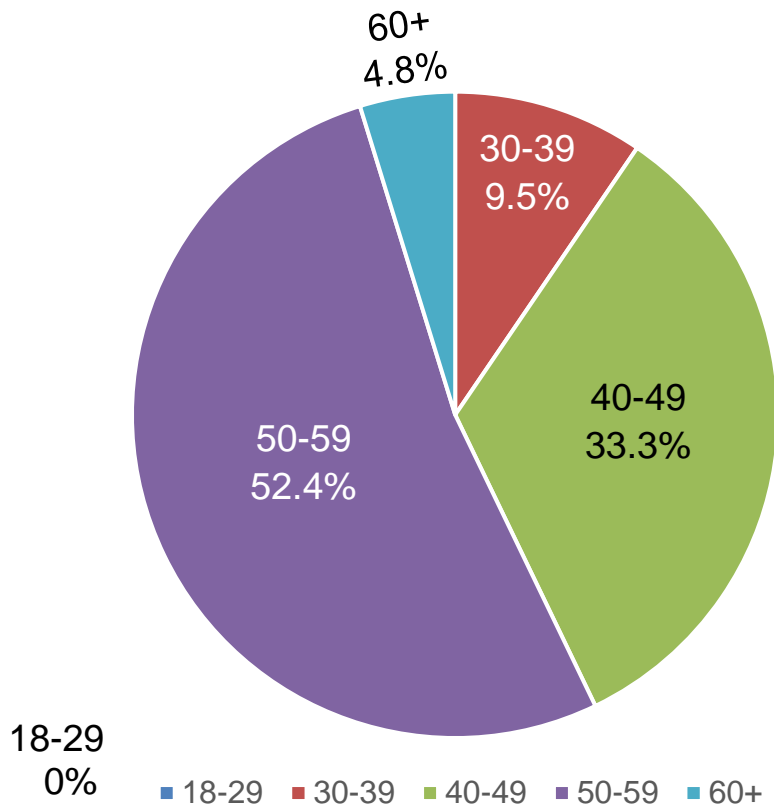


■ Female ■ Male

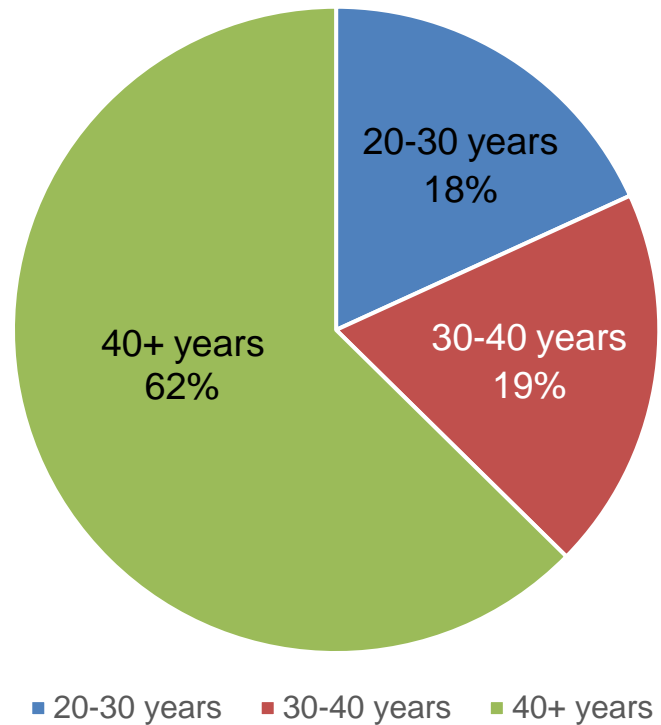
National Averages For Field*

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

Demographics: Age



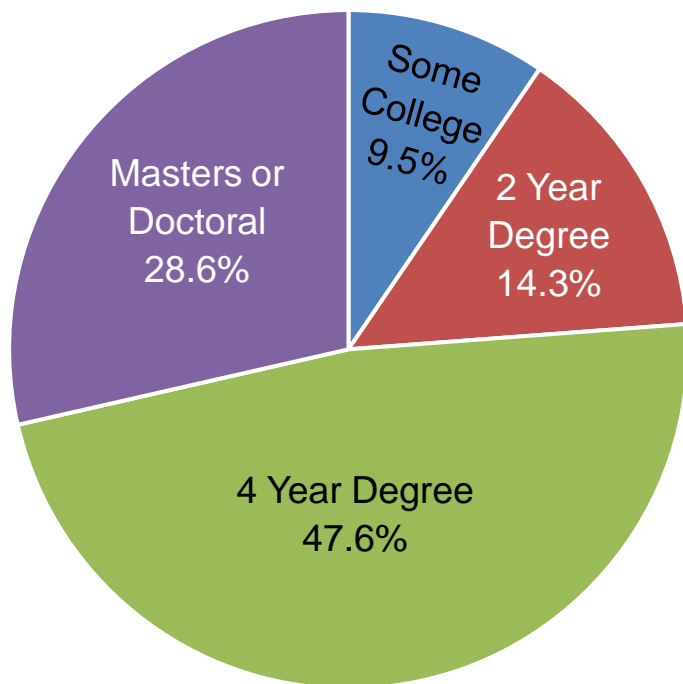
Study Participants
(n=21)



National Averages For Field*

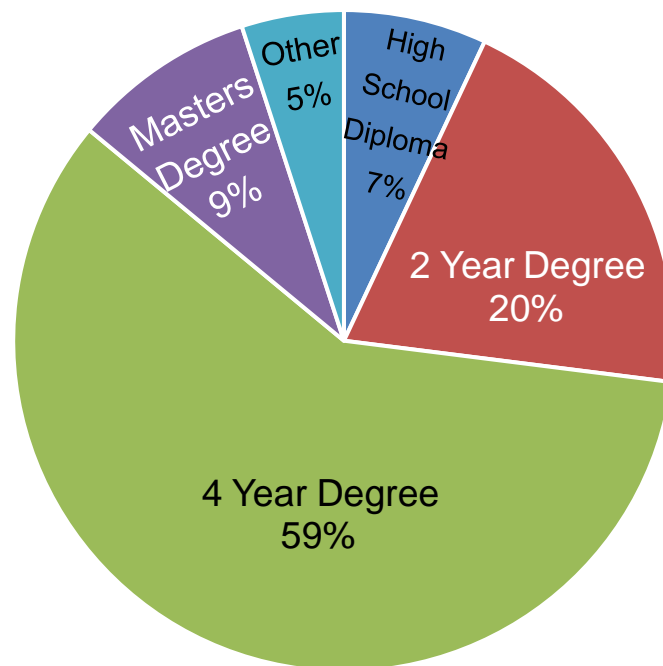
*Source: Education Paraprofessional Demographics and Statistics in the US (Zippia, 2023)

Demographics: Education



- Some College
- 4 Year Degree
- 2 Year Degree
- Masters or Doctoral

Study Participants
(n=21)

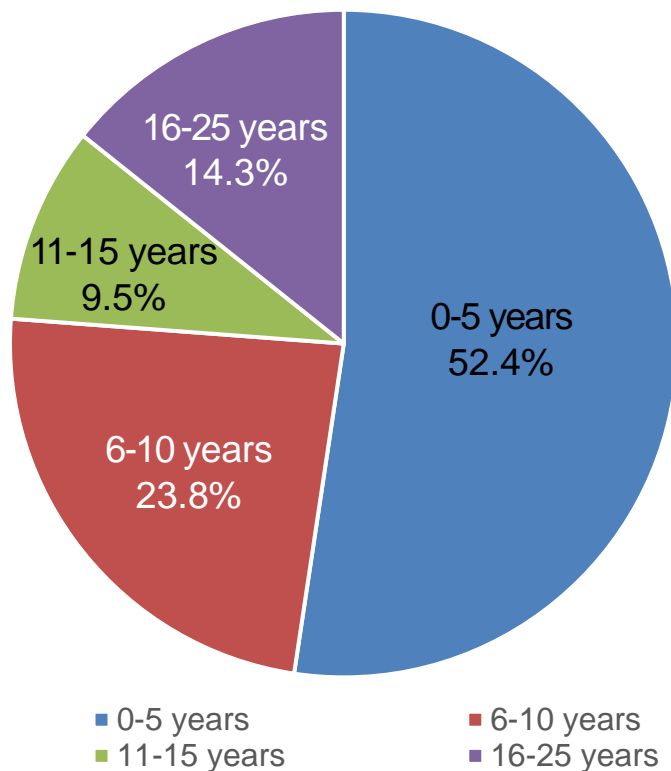


- High School Diploma
- 4 Year Degree
- 2 Year Degree
- Masters Degree

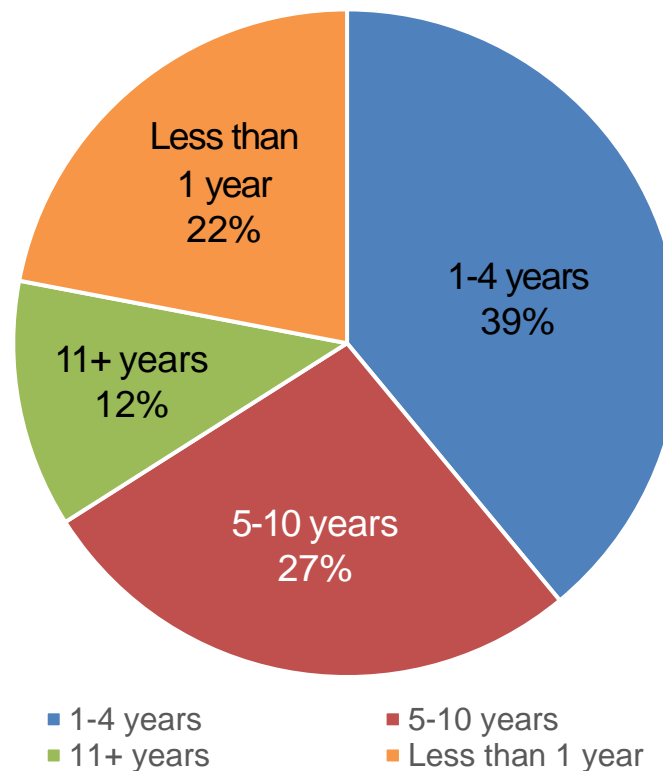
National Averages For Field*

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

Demographics: Paraprofessional Experience



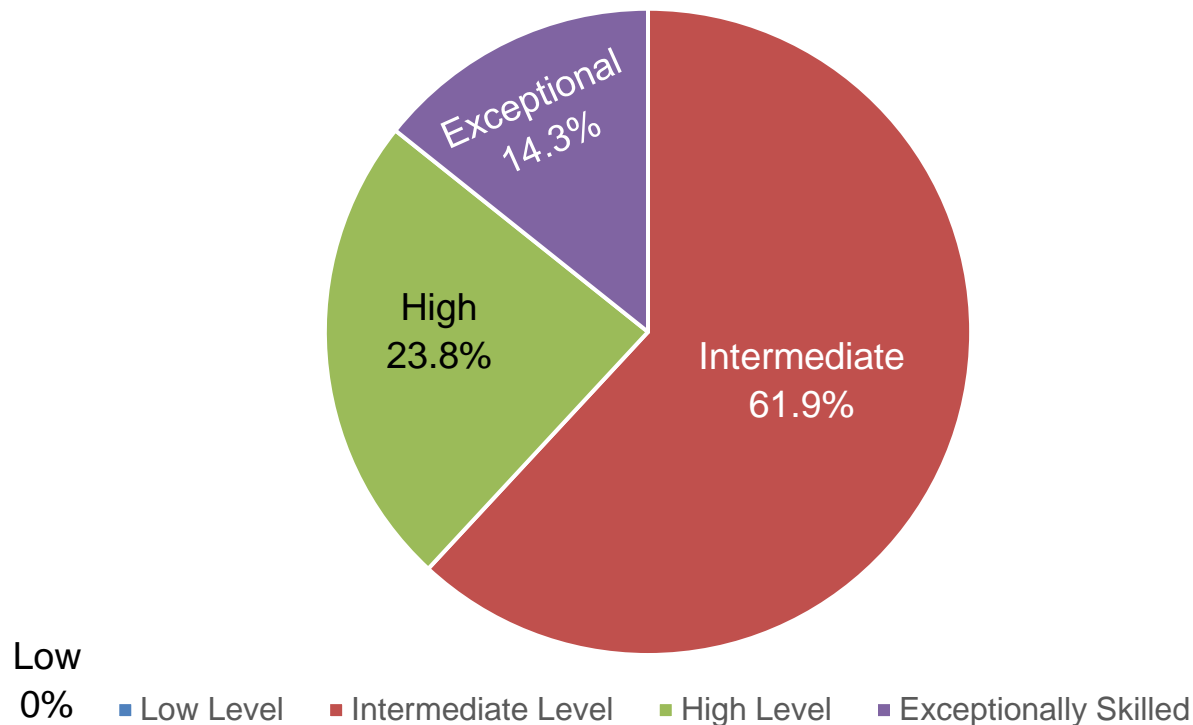
Study Participants
(n=21)



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=21)

OBJECTIVE MEASURES

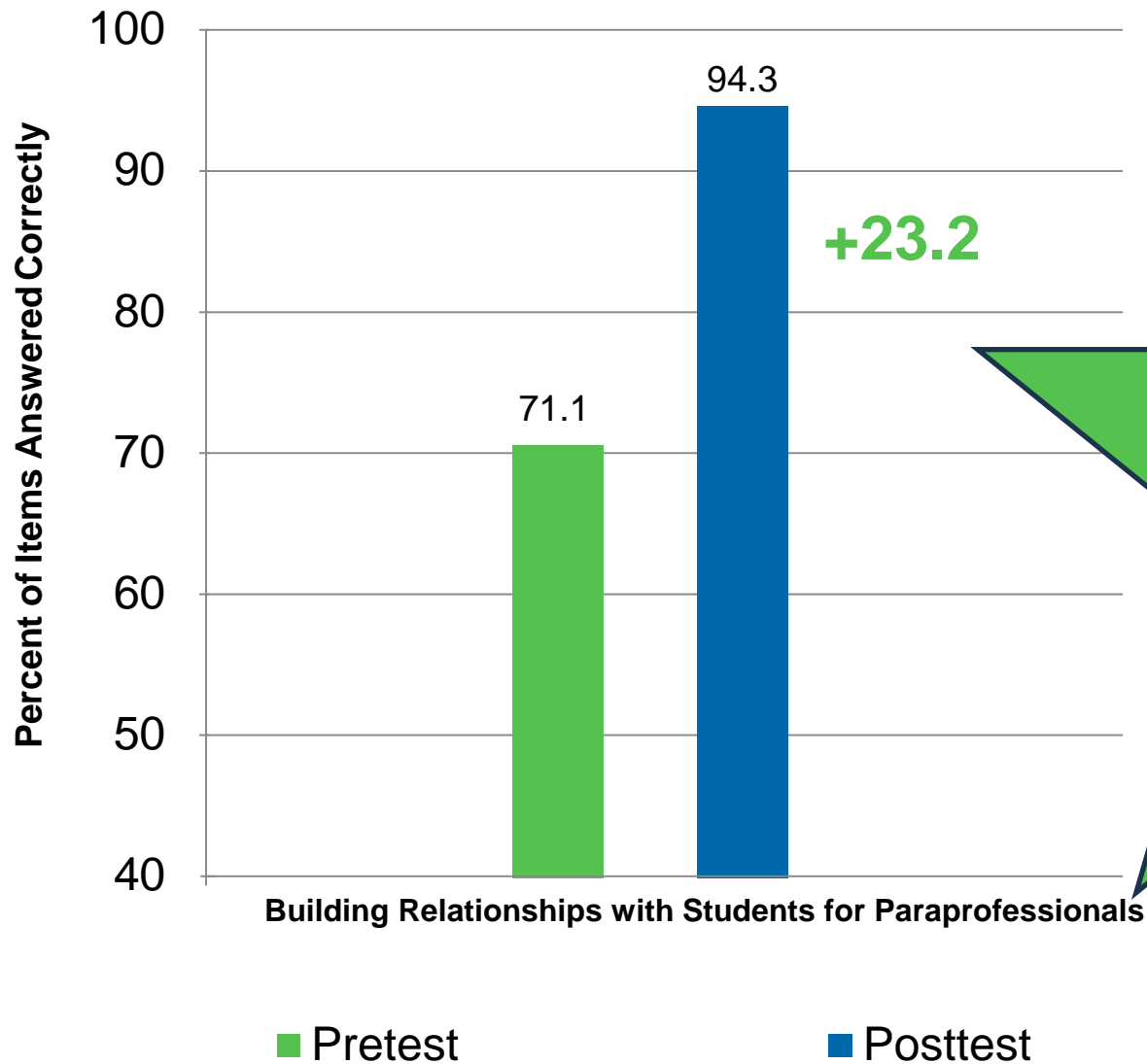
A comparison of pre- and posttest performance to determine growth as a result of instruction

Pretest to Posttest Comparisons

The 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, the course.

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

Pretest to Posttest Gains



* 21 people took the pre-test and 19 of those people completed the post-test.

Pretest to Posttest Gains

On average, participants increased their knowledge after taking the course *Building Relationships with Students for Paraprofessionals*.

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

Pretest to Posttest Gains

While performance on the pretest often varied based on key demographics, posttest scores proved consistent regardless of potential demographically-based advantages and/or disadvantages.

The average level of performance on all posttests was determined to be consistent, regardless of the participants':

- **Gender**
- **Age**
- **Level of education**
- **Years in the profession**
- **Computer skills**

Pretest: Mean Score	Posttest: Mean Score
71.1%	94.3%

Pretest to Posttest Gain: Gender

Gender	Pre-Test	Post-Test	
Female (including transgender women)	63%	88%	+25
Prefer not to answer	71.6%	94.7%	+23.1

Pretest to Posttest Gain: Age

Age	Pre-Test	Post-Test	
30-39	38%	88%	+50
40-49	80.7%	96.6%	+15.9
50-59	70.7%	94%	+23.3
60+	75%	88%	+13

Pretest to Posttest Gain: Education Level

Education Level	Pre-Test	Post-Test	
Some College / Technical Training	56.5%	100%	+43.5
2-year degree	63%	100%	+37
4-year degree	75.2%	92.8%	+17.6
Advanced Degree (Masters or Doctoral)	73.3%	94%	+20.7

Pretest to Posttest Gain: Paraprofessional Experience

Professional Experience	Pre-Test	Post-Test	
0-5 years	74.2%	94%	+19.8
6-10 years	75.2%	92.8%	+17.6
11-15 years	63%	94%	+31
16-25 years	58.7%	100%	+41.3

Pretest to Posttest Gain: Computer Experience

Computer Experience	Pre-Test	Post-Test	
Intermediate Level	68.6%	94%	+25.4
High Level	70.2%	97%	+26.8
Exceptionally Skilled	83.7%	92%	+8.3

PARTICIPANT BELIEFS

A look at participant self-assessment responses following instruction

Post-Survey Questions

Project participants completed the post survey after they finished the blended course experience. Participants were asked a variety of questions about their understanding of course material, ability to implement learning objectives, and their beliefs in each area of the training experience.

The online module was interactive and engaging.



88%

of participants Agreed or Strongly
Agreed with this statement

The in-person training was interactive and engaging.



76%

of participants Agreed or Strongly
Agreed with this statement

I gained knowledge in this training through the examples, group sessions, and interactive experiences that I can now implement in my daily classroom experience.



88%

of participants Agreed or Strongly Agreed with this statement

What are your professional goals for using the information you learned in the modules and in-person training session?

- Apply at least a couple of strategies daily in order to establish a stronger connection with my students.
- My goal is to continue to build meaningful connections with students and fellow staff members. I realize the focus was on relationships with students, but our staff relationships impact the teacher-students relationship as well. Our staff relationships have an impact on classrooms and how the children view us as well.
- Try my best to be that trusted adult in our students' life.
- I am always looking for ways to improve and to continue to learn to better support the students.
- Staying Positive and keep learning how can I help the students.
- Continued interaction in both gen ed and needs population. I have interactions with both classes and feel I can facilitate relationship building with both populations. I feel I can continue to bridge connections.
- To learn more about building relationships with students and enhance my contributions to the classroom.
- reminding myself student behavior isn't personal
- I plan to implement the strategies I learned to strengthen my relationships with students.
- Develop better relationships with students that are more difficult to reach
- To engage and connect with all students
- I loved finding new ways to interact with students and connect with them.
- My goals were to refresh what I already knew about building relationships. I did learn some strategies that I will use going forward.
- To understand students needs and have more flexibility in ways to approach those needs
- Truly understand why we need to understand students in order to help them, and how we can support individuals with different needs and personalities.
- I learned new method that i can apply.
- Would want the kids to interact more

I feel competent and confident implementing what I learned from the training.



88%

of participants Agreed or Strongly Agreed with this statement

I would rate the overall training experience, including the online module and in-person training session:



4.5 stars

On a scale of 1-5 stars with 1 being
Not Helpful and 5 being Excellent

I Would you like more training like this?



100%

of participants Strongly Agreed with
this statement