

Training ASD Providers in Evidence-Based Interventions in a Virtual Era

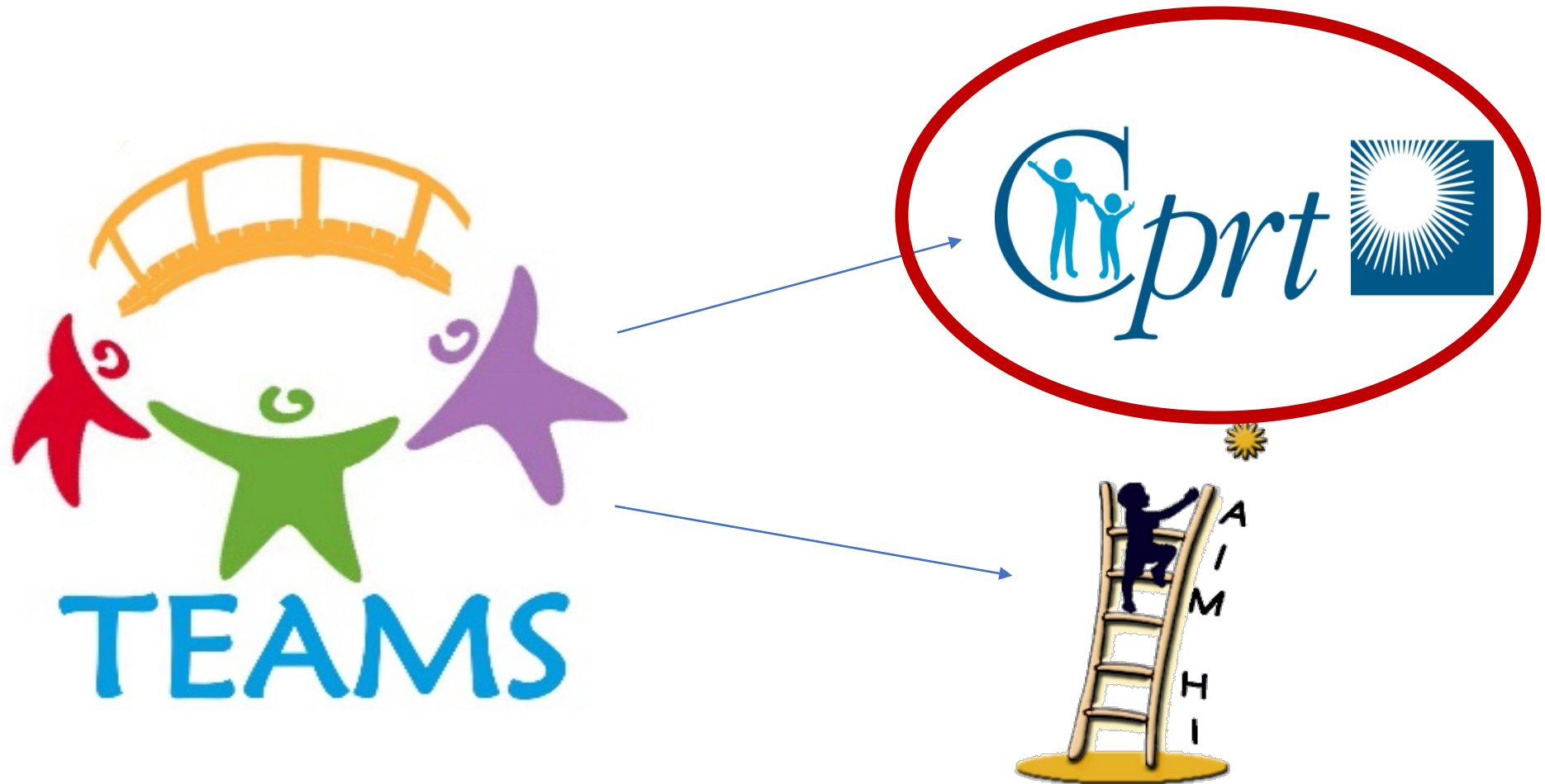
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Learning Objectives

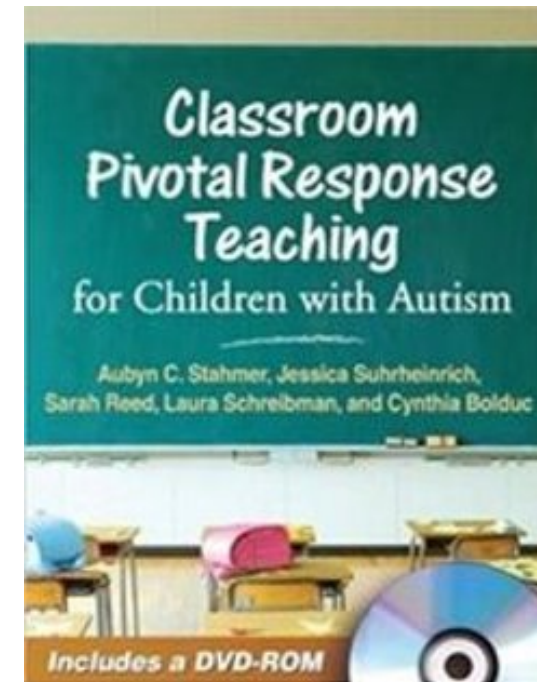
1. Understand coaching strategies for training providers to implement evidence-based interventions (EBI) for autism in educational settings
2. Understand the process and outcomes of providing a hybrid model of EBI training that includes e-coaching
3. Understand further adaptations made to e-coaching and virtual EBI implementation in response to COVID-19

Implementation of EBI in School Settings

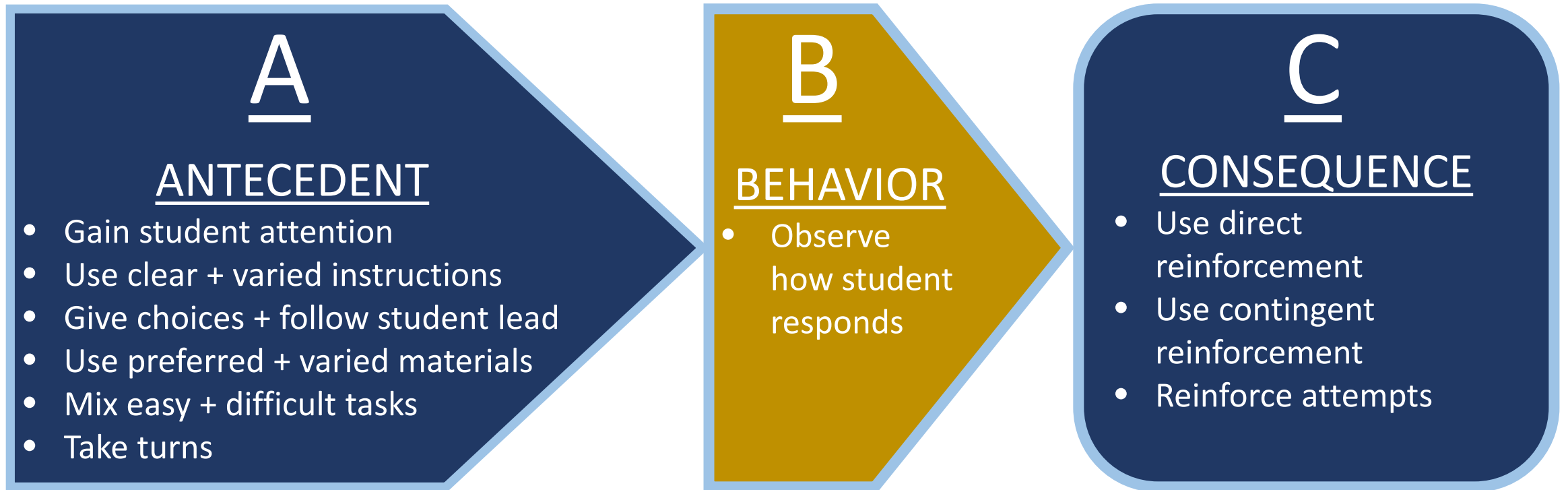


Classroom Pivotal Response Teaching (CPRT)

- Naturalistic developmental behavioral intervention
- Adaptation of PRT – collaboratively developed with educators
- Supports autistic students ages 3-10 during classroom activities
- Focused on increasing motivation, communication, and academic skills



Components of CPRT



CPRT Lesson – Video Example

ANTECEDENT

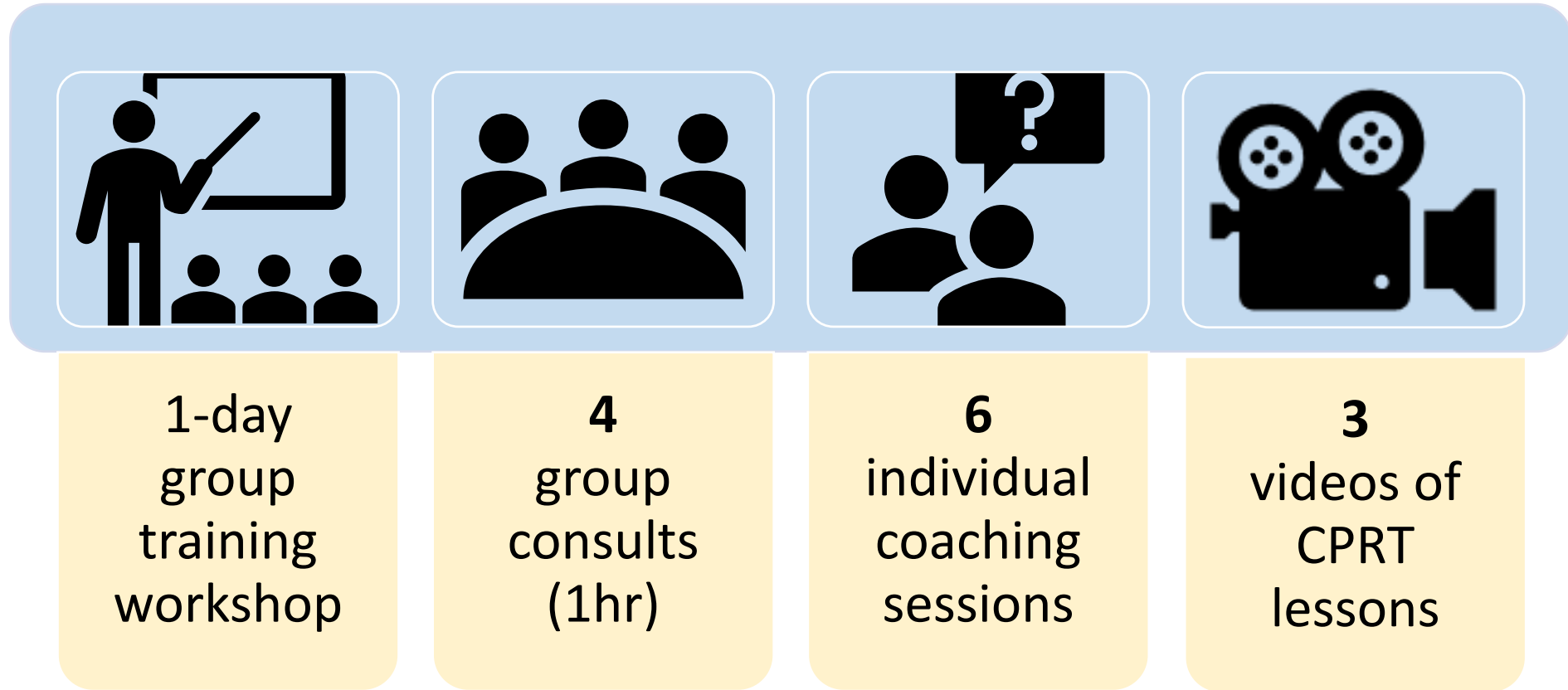
- Gain student attention
- Use clear + varied instructions
- Give choices + follow student lead
- Use preferred + varied materials
- Mix easy + difficult tasks
- Take turns

CONSEQUENCE

- Use direct reinforcement
- Use contingent reinforcement
- Reinforce attempts

In-Person CPRT Training

Over approximately 6 months:



In-Person CPRT Coaching

| - | ✓ | + | |
|---|---|---------------------------------------|------------------|
| Did not use this component (oops!) | Used this component sometimes. There were some ways it could have been used better. | Rocked it. Used this component often. | |
| Antecedent Components (CREATE) | | Teacher Self-Assessment - / ✓ / + | Observer's Notes |
| 1. Ensures student is paying attention before providing a cue | | | |
| 2. Provides clear and developmentally appropriate cues | | | |
| 3. Varies instructions | | | |
| 4. Intersperses learning goals with easy tasks | | | |
| 5. Uses preferred materials <input type="checkbox"/> Individual <input type="checkbox"/> Play-based <input type="checkbox"/> Enhanced academic | | | |
| 6. Varies materials | | | |
| 7. Gives choices <input type="checkbox"/> Between activity <input type="checkbox"/> Within activity | | | |
| 8. Follows the student's lead | | | |
| 9. Turn-takes when appropriate <input type="checkbox"/> Modeling <input type="checkbox"/> Social interactions <input type="checkbox"/> Turns with peer(s) | | | |

CPRT Lesson Planning

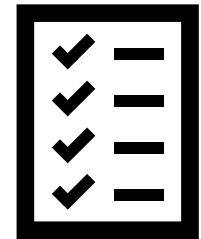
| Date(s) | Lesson Type | Goals | |
|---------|---|--|--------------------------|
| | Check one: Individual <input type="checkbox"/> Small Group <input type="checkbox"/> Whole Group <input type="checkbox"/> Group Size: _____ | Individual- Learning Goal(s) 1. _____ | Easy Task(s) 1. _____ |
| | | Group- Learning Goal(s) 1. _____ | Easy Task(s) 1. _____ |
| | | Lesson description- Briefly describe what the lesson will look like: _____ _____ _____ | |

| PAUSE for 5-10 seconds | | | | |
|-----------------------------------|----------------------------|-------------------------------------|--|----------------------------------|
| RESPOND to the Student's Behavior | Use Direct Reinforcement | | | |
| | Provide Contingent Rewards | Frequency: _____ | Description of student behavior: _____ | Incorrect/ non-responsive: _____ |
| | Reward Attempts | Description of "good trying": _____ | | Rewards for attempts: _____ |

| | | | |
|-----------------------|---|---|--|
| CREATE an Opportunity | Get Student Attention | | |
| | Plan for Prompting | | |
| | Use Clear and Varied Instructions | Varied Instructions for Learning Goal(s) 1. _____ 2. _____ | Varied Instructions for Easy task(s) 1. _____ 2. _____ |
| | Use Preferred Materials (and vary them) | Check all that apply: Individual <input type="checkbox"/> Play-based <input type="checkbox"/> Enhanced <input type="checkbox"/> 1. _____ 2. _____ | |
| | Give Choices | Check all that apply: Between <input type="checkbox"/> Within <input type="checkbox"/> 1. _____ | |
| | Turn-Take | Student turn(s): _____ | Teacher turn(s): _____ |

CPRT Clinical Data Collection

- Discussed various ways to collect data on student goals during CPRT lessons (individual and group) during consult
- Practiced using data sheets during video examples
- Used a data sheet during CPRT lesson, submitted to coach towards CPRT certification



CPRT Research Findings

Training Success!

73% of 111 teachers completed training and met fidelity requirements

Useful and Effective!

"I found my students did learn the skills presented and they seemed to have fun while learning (and I did too)"

Changing Practice!

"Once you get used to implementing the choices, shared control, and the reinforcement or rewards for attempts it makes teaching so much easier for all involved and we end up with so much more"

Improved Child Outcomes!

Improved student engagement and reduced challenging behaviors

E-Coaching in CPRT

- Access to training is often limited by proximity to training site
- Distance technology is effective for training teachers
- Can address training gaps for geographically distant schools
- Is e-coaching effective for training providers to implement CPRT?



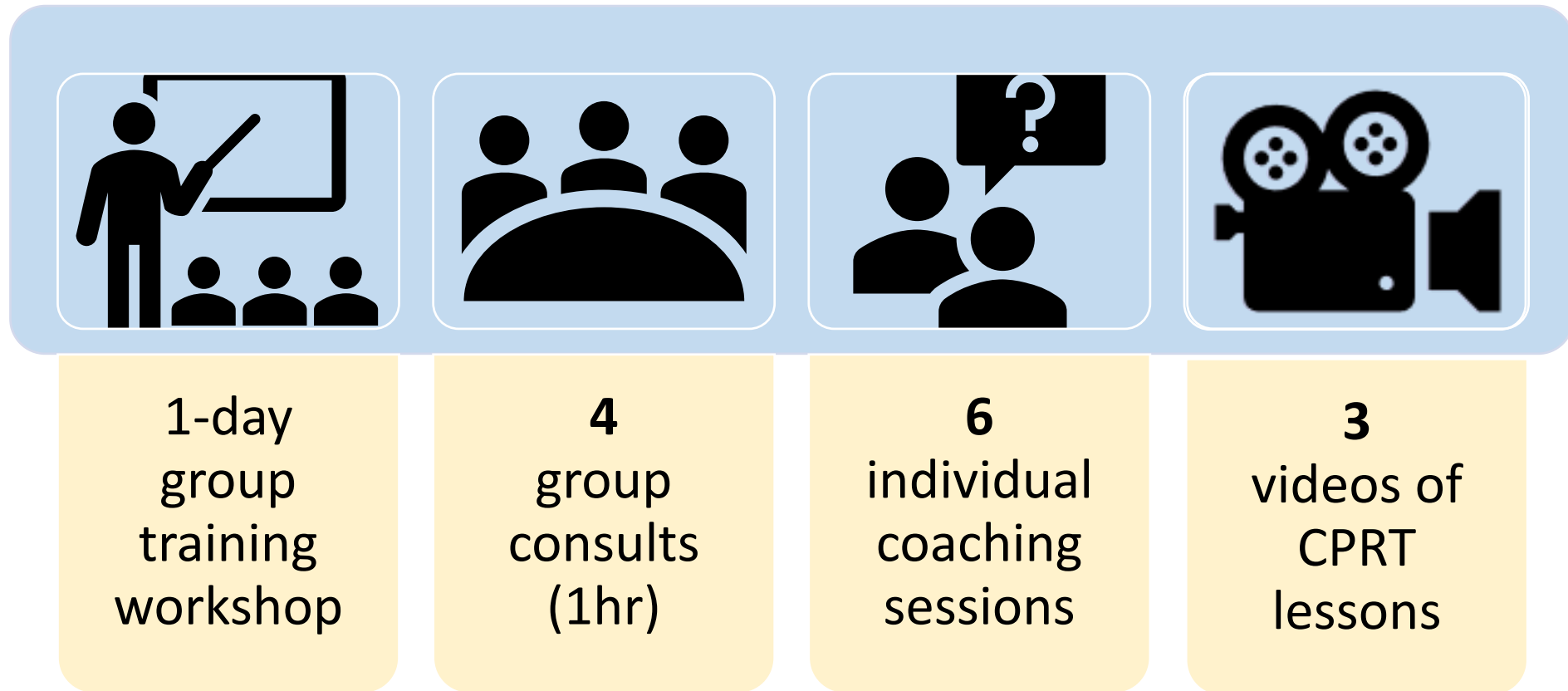
Participants

- 166 teachers (**32** distance group, **134** in-person group)
- Inclusion criteria:
 - Teacher or direct service provider (e.g., Speech pathologist, occupational therapist) in public school
 - Student on caseload with educational or medical diagnosis of autism between ages of 3-10

*note: participants completed training prior to COVID-19 restrictions

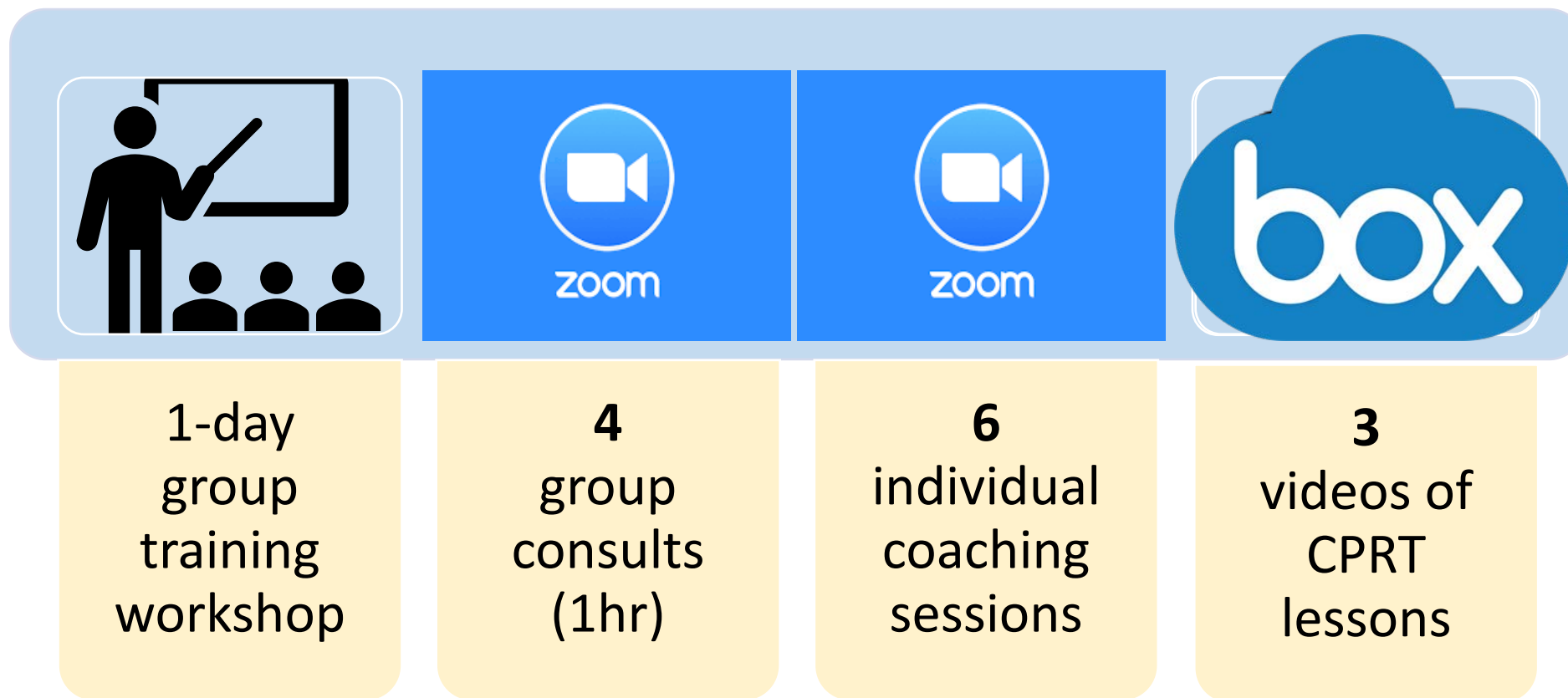
CPRT In-person Training

Over approximately 6 months:



CPRT Distance Training

Distance group completed all coaching and consults via Zoom, uploaded videos of CPRT lessons to Box



Results

| | In-Person | Distance | <i>t</i> | <i>p</i> | 95% CI |
|---------------------|--|--|----------|----------|----------------|
| Training Completion | 87.6% | 61.3% | 1.49 | .14 | .76-7.1 |
| CPRT Certification | 79.8% | 54.8% | 1.76 | .08 | .89-6.85 |
| CPRT Fidelity | <i>M</i> = 88.96 (<i>SD</i> = 12.04) | <i>M</i> = 83.57 (<i>SD</i> = 17.72) | .94 | .36 | -3.53- 9.55 |

No statistically significant differences between groups

No significant
differences
between groups

In-person scored
significantly higher

CPRT Acceptability

| | <i>t</i> | <i>p</i> | 95% CI |
|--------------------------|----------|----------|----------|
| CPRT meets my approval | -1.2 | .24 | -.42-.11 |
| CPRT seems implementable | -1.62 | .12 | -.64-.08 |
| CPRT seems easy to use | -.89 | .38 | -.57-.22 |

Coach-Teacher Alliance

| | <i>t</i> | <i>p</i> | 95% CI |
|--|----------|----------|----------|
| I received an appropriate amount of feedback from the coach | 2.23 | .04* | .03-.69 |
| The coach showed a sincere desire to understand and improve my classroom | .38 | .71 | -.22-.32 |
| The coach provided support that matched the needs of me and my classroom | 1.39 | .18 | -.10-.50 |

Barriers to E-Coaching

- Uncertainty with using technology/apps
- Lack of reliable equipment (computers, iPads, wireless routers, etc.)
- District technology restrictions
- Slow/inconsistent Wi-Fi connections
- Developing coach/teacher rapport



Teaching in a Pandemic: A New Adventure



Adapting CPRT for Virtual Implementation

- 10-year-old male with autism
- Loves cars, Disney movies, animals, and dinosaurs
- Expressively communicates in 1-3 words phrases, receptively understands multi-word sentences
- Expressively/receptively identifies most letters and numbers up to ~50
- Received behavioral services (e.g., PRT) at school since age 5
- Prior to lesson: coach collaborated with caregiver, discussed target skills, student proficiency with technology, plan for prompting

Adaptations for Virtual Training

- Workshop
 - Converted some content into 5-15 min modules on Edpuzzle
 - Narrated Powerpoint recordings embedded with interactive activities, track teacher participation
 - Remaining content covered in live virtual workshops spread over two days
- Coaching
 - Coaches joined teachers' virtual Zoom lessons



Caregiver Collaboration

- Added caregiver collaboration and engagement strategies to workshop and consults
- Provided guidance during coaching sessions on collaborating with caregivers
- Added caregiver components to CPRT lesson plan template



CPRT Lesson Plan Modifications

Parent priorities
for goals

Parent ideas for
reinforcing materials

Ideas for planning
environment to limit
distractions

Parent priority/goals related to CPRT lesson (discussed with the parent in preparation of lesson):

Strategies for motivation/ access to materials and reinforcers: (discuss with parent in preparation of the support during the lesson):

Environmental Planning: (discuss with the parent ideas that will work in the home environment to limit distractions and support the lesson)

Where Are We Now?

- Currently completing intervention and data collection
- Preliminary data:

| <i>n</i> | |
|-----------------------|----------|
| Completed Training | 25 |
| In-Progress | |
| Discontinued Training | |
| Met CPRT Fidelity | 15 (60%) |

Lessons Learned (so far)

- Challenges:

- Student engagement, especially during group lessons
- Reinforcement delivery
- Student not attending sessions
- Caregiver availability/engagement
- Teacher is instructing caregiver to deliver the intervention

- Facilitators:

- Teachers have new familiarity and comfortability with technology
- Technology makes coaching efficient



Acknowledgements

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Thank You!



- For TEAMS Study information:
 - Email: teams-study@ucsd.edu
 - Website: teamsASDstudy.org



- For CPRT information:
 - Website: classroomprt.org