

# The Role of Administrators in the Delivery of Exemplary School-Based Autism Support Programs

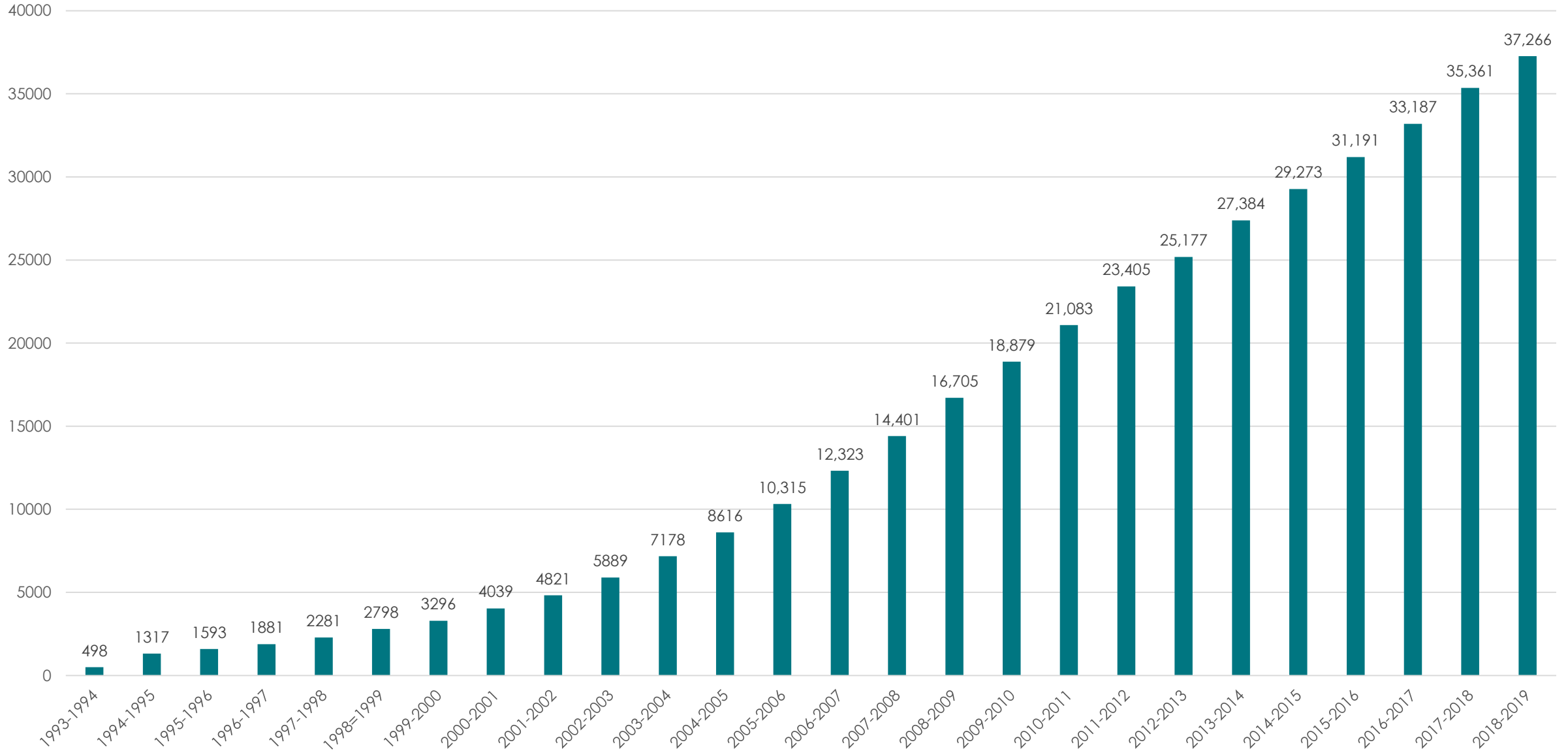
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# The Role of Administrators in Autism Support Programs

- Leadership
- Supervision
- Collaboration
- Integration of School Community

# PDE Child Count Data: Students Eligible for IEPs Under Definition of Autism, Ages 3-21



# Leadership

- Requires informed advocacy for effective practice
  - Evidence for selecting practice
  - Evidence of practice effectiveness
- Believability
  - Conceptually informed
  - Practice models (instructional leader!)

# The evidence that is most important for getting educational outcomes

- Outcomes relative to their lives and the lives of children:
  - Greater independence
  - For the child to reach their full level of potential
  - Individual happiness for all family members and society as a whole
  - Reduction or elimination of any problem behavior
  - Ease of implementation

# Education and Evidence

- The educational system is established to assist all students in being productive members of society and to demonstrate citizenship skills allowing effective participation in our society and democratic process
- School based instruction should provide demonstration of such outcomes
- Providing measureable outcomes is part of IDEA and Chapter 14 in PA

# Commonality of Effective Interventions

- Outcomes rely on practical action: talk is not enough
- Effective instruction needs to address meaningful skills
- Individualization is key
- Outcomes must be verified

So where do the interventions that promote such outcomes come from?



## Two Sources of Evidence

1. Interventions selected from sound science-based evidence:

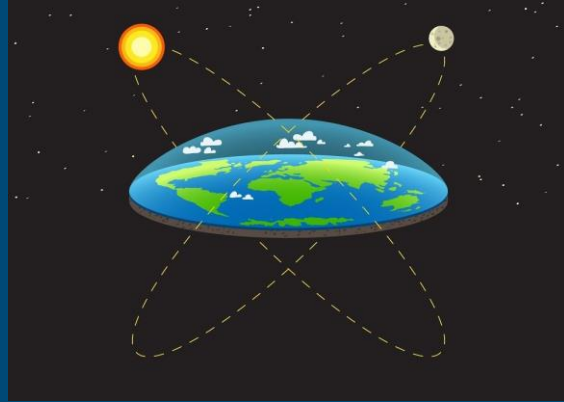
- Scientific findings published in peer reviewed journals
- Large scale comparison studies with random assigned control group
- Repeated demonstrations of single subject design studies

2. Individual demonstrations of the effectiveness of an intervention: Did it work with this individual?

# Evidence is a funny word

- Outcomes for the individual learner are what matter the most
- This does not mean that all interventions are equal or should be selected based simply on preference
- But, there is no certain evidence: just closer approximations

# The Relativity of Wrong, Isaac Asimov, 1988



Being wrong in one way is not necessarily as bad as being wrong in another way

# Some Summaries for Effectiveness of Autism Treatments (EBPs)

- American Academy of Pediatrics (2007)
- American Psychological Association (2017)
- American Society of Child and Adolescent Psychiatry (1999)
- United States Surgeon General, US Department of Health and Human Services (1999)
- National Autism Center, National Standards Report 1 and 2 (2009, 2015)
- Maine Departments of Health and Human Services and Department of Education, Children's Services Evidence-based Practice Advisory Committee (2009)
- The Missouri Autism Initiative, Missouri Department of Mental Health (2012)
- The New York State Department of Health (2017)
- University of North Carolina, Frank Porter Graham Center (2014)

National Standards  
Report, National Autism  
Center, 2009

<http://www.nationalautismcenter.org/pdf/NAC%20NSP%20ReportFIN.pdf>

- Published between 1957 and the fall of 2007.
- This was the largest meta-analysis of its kind published up until that time.
- Identified eleven 'established' treatments: treatments that produce beneficial outcomes and are known to be effective for individuals on the autism spectrum.
- The overwhelming majority of these interventions were developed in the behavioral literature (e.g. applied behavior analysis, behavioral psychology, and positive behavior support.)”

# Conclusions:

• Approximately two-thirds of the Established Treatments were developed **exclusively** from the behavioral literature (e.g., **applied behavior analysis**).

- Initially reviewed 7,038 abstracts of research
- Rigorous review process led to a total of 775 studies being retained for final analysis

• Of the remaining one-third of the Established treatments studies are derived **predominantly** from the behavioral literature.

• This pattern of findings suggests that treatments from the behavioral literature have the strongest research support at this time

## A Note about Skill Levels

- The evidence for the effectiveness of interventions based on ABA for individuals with autism is not tied to level of severity

# Applied Behavior Analysis

- It is not a “protocol” or a “thing”
  - One would not say, “I am doing ABA”
- ABA is a process and conceptual system that can be used to guide decisions regarding any behavior change programs



# The Dimensions of ABA (Baer, Wolf and Risley, 1968)

- Applied
- Behavioral
- Analytical
- Technological
- Conceptually Systematic
- Effective

# ABA: The Basic Model

- Antecedent
  - Motivation (MO) and events that guide responding (Sds)
  - Prompts for teaching purposes
- Behavior
  - Observable and measureable (more complex than it sounds)
- Consequence
  - Things get better (reinforcement)
  - Things get worse (punishment)

# Some Key Instructional implications of ABA

- Rate of Response: dense active student responding
- Reinforcement principles
- Sequences of Instruction
- Data based decision making
- Focus on the relation between an independent variable (teaching) and a dependent variable (student learning)
- Procedural descriptions
- Treatment integrity
- Individualization

# Pennsylvania Certification: Behavior Analysis in Schools

- CSPG No. 203 Page 1 of 2  
August 1, 2016
- Staffing Assignment: Behavior Analyst (PreK-12)
- Behavior analysis is the scientific study of principles of learning and behavior. Applied behavior analysis (ABA) is a systematic approach for influencing socially important behavior through the identification of reliably related environmental variables and the production of behavior change techniques. The Board Certified Behavior Analyst certificate or PA Behavior Specialist license is required to perform behavioral intervention and support services for students with autism and other identified disabilities, as well as for regular academic students

# A Behavior Analyst is qualified to:

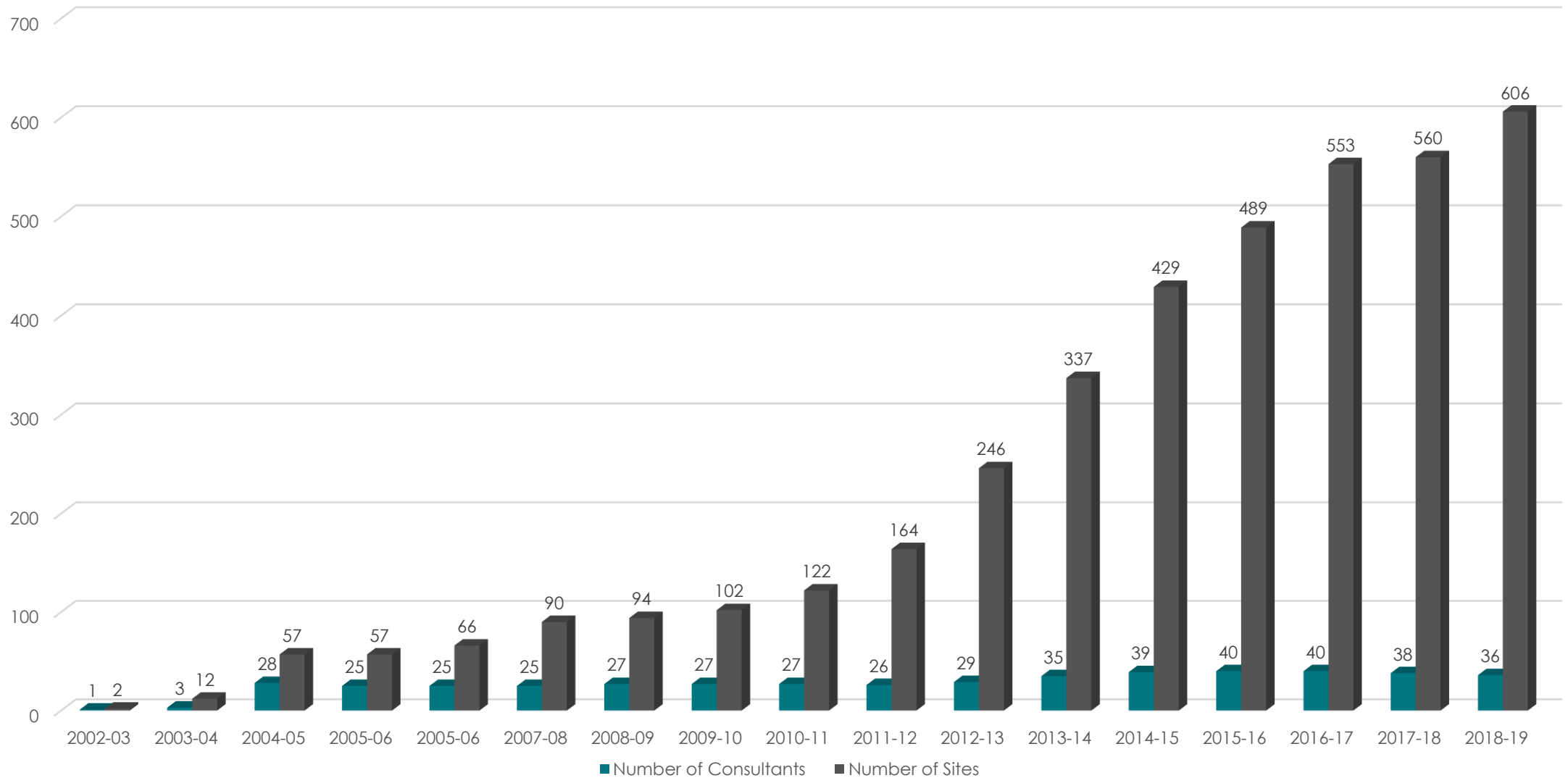
- Develop and **implement functional behavior assessments and positive behavior support plans.**
  - Assist in the design and implementation of educational programs based on: Principles of behavior analysis (including motivating operations, stimulus control, behavior definition, reinforcement); and
  - Relevant practices such as discrete trial instruction, natural environment training, an analysis of verbal behavior, mand training, group contingencies, token systems, modeling techniques, activities of daily living, habit change, direct instruction and precision teaching.
- Be involved in the **development and assessment of effective intervention training** including staff training, program specification, treatment fidelity, data calibration (such as inter-rater agreement), production of treatment manuals, data collection procedures, and analysis of accumulated data.
- **Evaluate treatments** through appropriate experimental design such as case study formats and single subject designs.
- **Provide consultative and direct support** for students with a wide range of disabilities including autism, social emotional disabilities, intellectual disabilities, multiple disabilities, and other categories of eligibility.
- Engage in activities relevant **to problem behavior prevention and school-wide systems of support.**

## PaTTAN's Efforts

- Getting ABA into schools
- Review data

# History of Sites Served

## PATTAN Autism Initiative ABA Supports



# PATTAN AI ABA Supports Training Model

- “Boot Camp”
- “Advanced Boot Camp”
- “Boot Camp for Basic Skill Sets”

## Videos and Manuals

- Online resources <http://www.pattan.net/Videos/Browse/?topic=3>
- Resource file <http://webapps.pattan.net/files/PaTTANAutismResources.zip>
- Mand manual [http://www.pattan.net/category/Educational%20Initiatives/Autism/page/Interactive\\_mand\\_training\\_manual.html](http://www.pattan.net/category/Educational%20Initiatives/Autism/page/Interactive_mand_training_manual.html)

## Access to Developments in Field of Autism/ABA

- National Autism Conference (in conjunction with Penn State University) <http://autism.outreach.psu.edu/>

## Site Review

- Guides consultation and local training
- Allows assessment of consultation effectiveness

## On site focused consultation (Average 1-2 per month)

- Modeling and practice with performance feedback
- Consultation notes
- Treatment Fidelity



## Competency- based trainings

- Intensive Skill Training in Applied Behavior Analysis for Teams Supporting Students with Autism (“Boot Camp”)
- Intensive Skill Training in Applied Behavior Analysis for Teams Supporting Students with Autism (“Advanced Training”)
- Establishing Basic Skill Sets for Students with Autism Spectrum Disorders (“Early Learner Training”)

	<b>Boot Camp</b>	<b>Advanced</b>	<b>Early Learner</b>
Number of Trainings	91 (July 2010-April 2019)	28 (Feb 2014-Feb 2019)	19 (March 2016-Feb 2019)
Total Participants	7232 (mean: 79)	1396 (mean: 51)	986 (mean: 54)
Mean Written Pre-test	54% (range: 39-68%)	50% (range: 42-56%)	42% (range: 31-50)
Mean Written Post-test	93 (range: 74-97%)	95 (Range: 90-98%)	88 (range: 74-96%)
Mean Oral Test	95% (range 77-100%)	97% (range: 92-100%)	96% (range: 79-99)
Mean Choral Responses	689 (IOA: 97%)	252 (IOA: 97%)	259 (IOA: 97%)

# Boot Camp” Competencies

Competency	Description	Mean
Competency 1	Fluency for Tact of Trial Type by Verbal Operant	26/min
Competency 2	States Errorless Procedure	100%
Competency 3	Demonstrates Errorless Procedure	100%
Competency 4	States Error Correction Procedure	100%
Competency 5	Demonstrates Error Correction Procedure	100%
Competency 6	Data system, Notes mastered items	100%
Competency 7	Data System completes probes, enters data, introduces new skills, graphs	100%
Competency 8	Mand Prompt transfer procedures; states and demonstrates	100%
Competency 9	Mand Error Correction; states procedures and demonstrates	100%
Competency 10	Sets up materials for Intensive Teaching and tacts procedure and data system	99%
Competency 11	Demonstrates 4 Run-throughs for Intensive Teaching	99%

# Advanced Training” Competencies

Competency	Description	Mean
Competency 1	State/Demo errorless teaching of tacting actions	100%
Competency 2	State/demo error correction of tacting actions	100%
Competency 3	State/Demo errorless of noun-verb tact	100%
Competency 4	State/Demo error correction of noun-verb tact w/contrast	100%
Competency 5	State/Demo errorless of Part/Feature	100%
Competency 6	State/Demo error correction of Part/Feature w/contrast	100%
Competency 7	State/Demo errorless teaching for adjectives	100%

# “Early Learner Training” Competencies

Competency	Description	Mean
Competency 1	Assess approach behavior	100%
Competency 2	Assess contextually controlled responses	100%
Competency 3	Demo steps in “come here” protocol (including prompt fading)	100%
Competency 4	Behavior plan structure (function and 3-component interventions for behavior reduction)	100%
Competency 5	Demo shaping procedures for early mands training	100%
Competency 6	Demo prompt procedures for early mands training	100%
Competency 7	Demo sequence of at least 5 context controlled trials	100%
Competency 8	Demo object imitation protocol	100%

<b>Participant by Job Description</b>	<b>Percent of Attendees</b>
<b>Teachers</b>	<b>42%</b>
<b>Para-educators</b>	<b>33%</b>
<b>Internal Coach/Consultant</b>	<b>9%</b>
<b>Speech and Language Pathologists</b>	<b>11%</b>
<b>Administrator</b>	<b>6%</b>
<b>Behavior Analyst</b>	<b>5%</b>
<b>Parent of Child with Autism</b>	<b>6%</b>
<b>Other (agency personal)</b>	<b>5%</b>

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Competency 11	Demonstrates 4 Run-throughs for Intensive Teaching	99%

# A Note on Supervision

- Two Handouts:
  - 1. Danielson Evidence and Examples
  - 2. Guiding Questions for Conversations between Principals and Teachers



# PaTTAN ABA Supports Site Review

- Main criteria for assessing implementation of evidence-based practice resulting from consultative efforts
- Tied to effective teaching/evidence based practice
- Implementation criteria is rigorous and reliable (IOA data over 93% over 14 year period)

# Site Review: Overview

- Classroom Organization

- Schedules
- Classroom environment
- Materials
- Data: student notebooks

- Consultation/Training

- Inclusive Practices

- Family Engagement

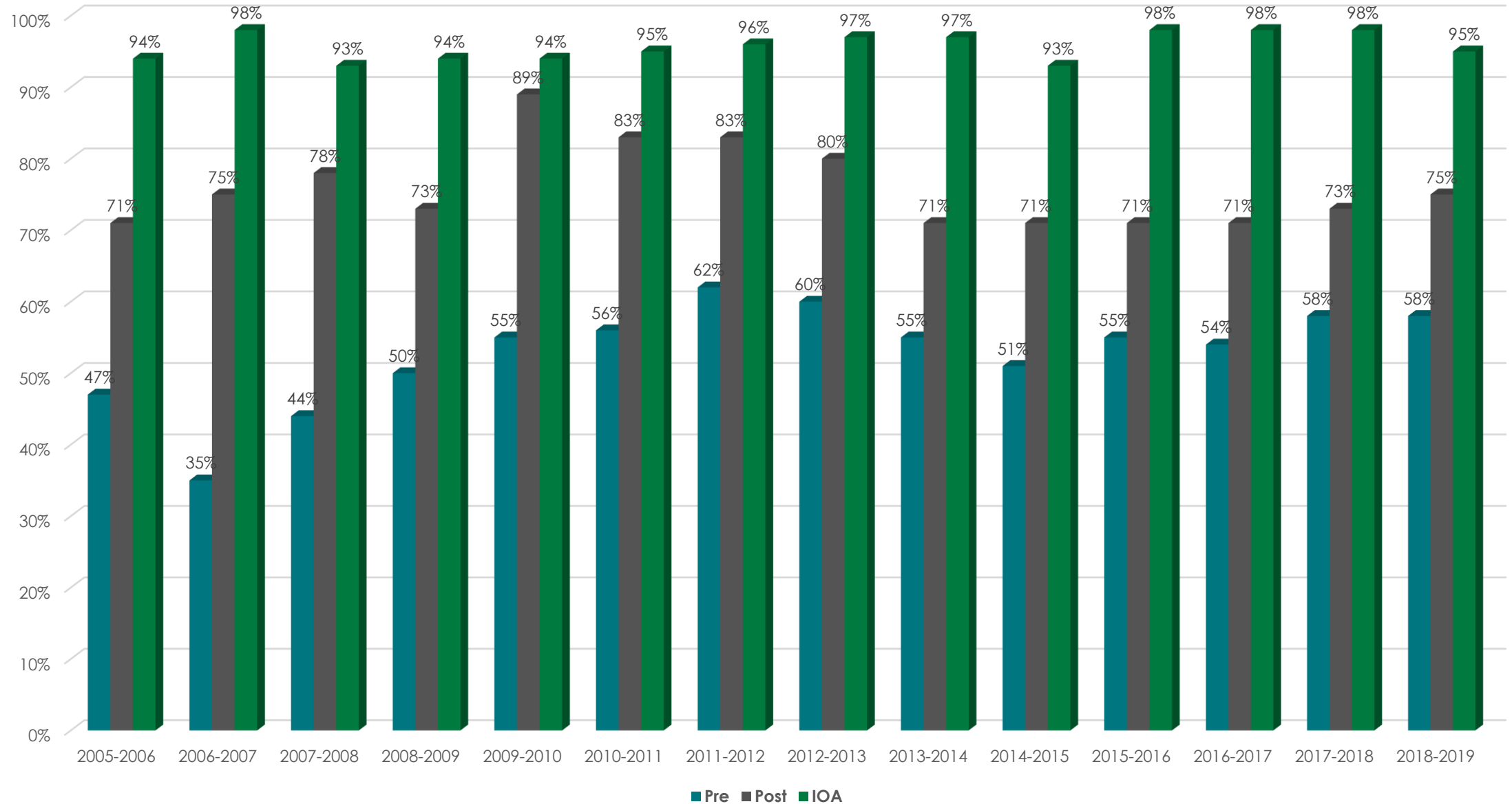
- Instruction

- Mand
- Intensive teaching
- Natural Environment Training
- Vocal training
- Direct Instruction and group instruction
- Fluency
- Social Skills

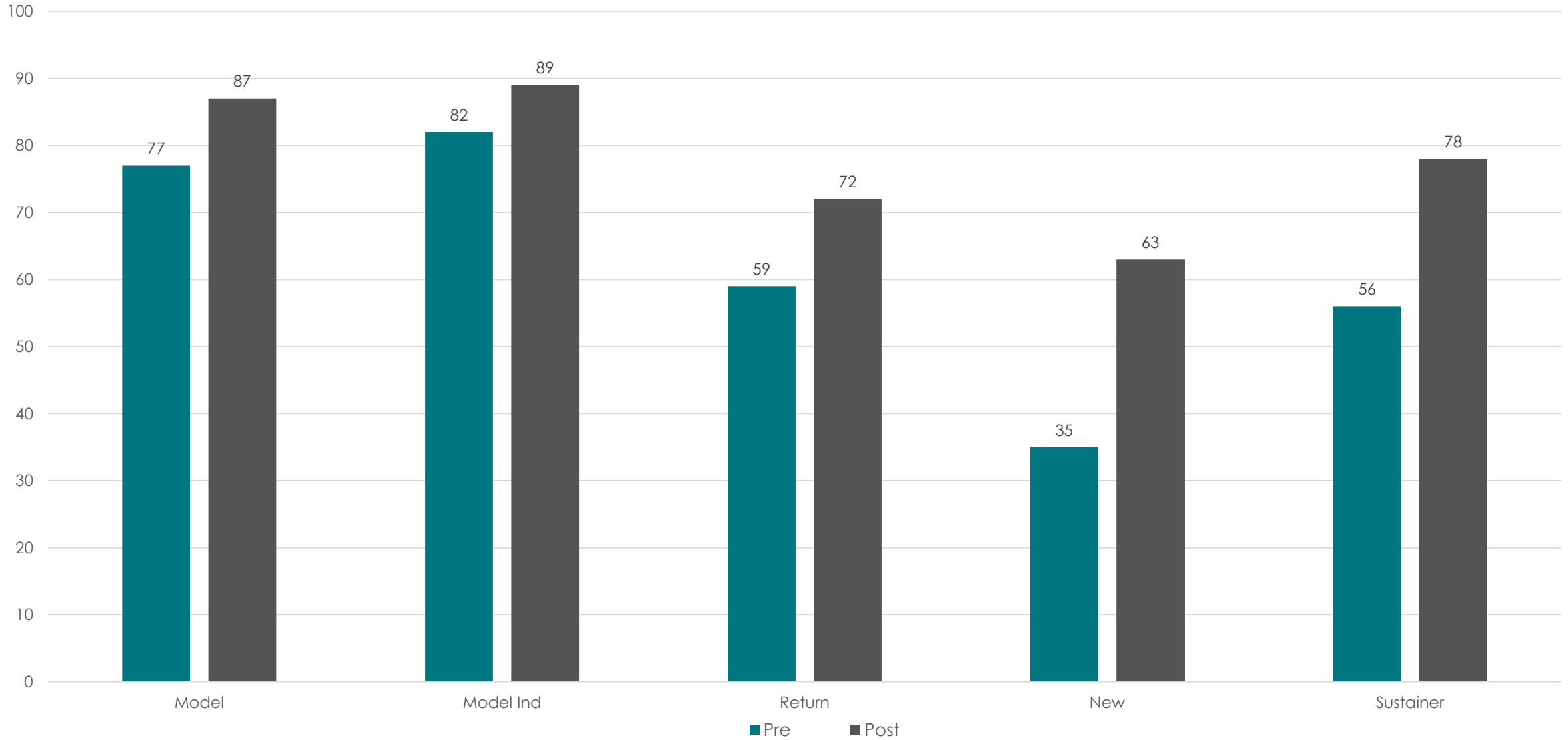
- Behavior Interventions to reduce problem behavior

- FBA
- Implementation (data, treatment integrity, implemented as written, staff training, etc.)
- Plan design (reduce motivation, teach competing response, extinction)

# History of Pre to Post Site Review



# Pre to Post Site Review 2018-2019 School Year



IOA: 95%

# Treatment Fidelity

- Instruction, reinforcement systems, and positive behavior supports programs require staff training and consistent implementation
- Treatment integrity is critical to successful autism support programs
- Examples of treatment integrity methods:
  - Checklists
  - Inter-observer agreement regarding instructional delivery
  - Transcription of instructional sessions
  - Event recording

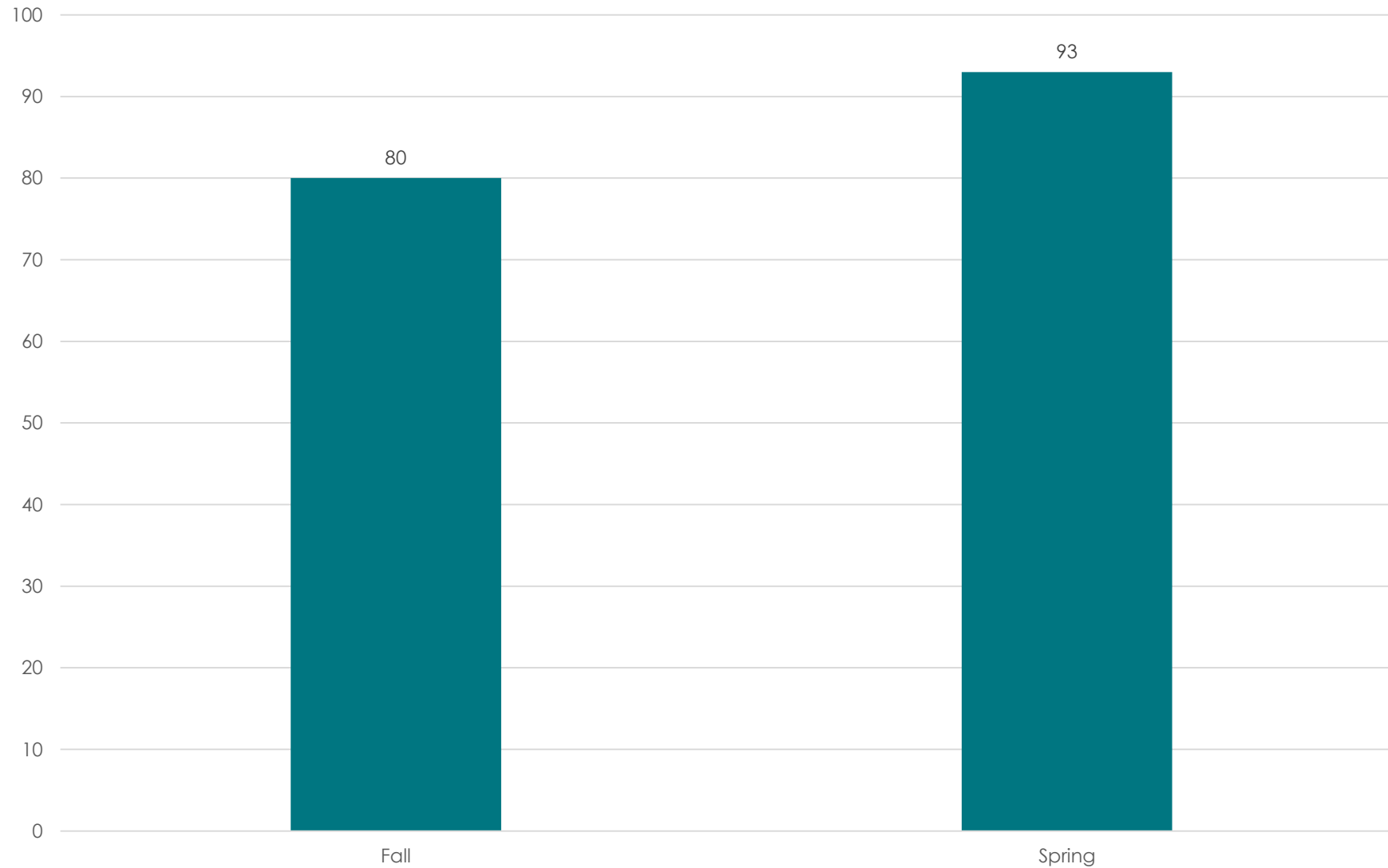
## Intensive Teaching Treatment Fidelity Checklist:

**Date:** \_\_\_\_\_ **Staff:** \_\_\_\_\_ **Observer:** \_\_\_\_\_

	YES	NO	N/A
1. Was instructional area neat and sanitized?			
2. Did instructor have all materials needed for instruction organized and ready?			
3. Did instructor have a variety of valuable reinforcers available?			
4. Did session begin with delivery of reinforcement or an opportunity to mand?			
5. Did instructor gradually fade in the demands/tasks presented?			
6. Did instructor use fast-paced instruction (no more than 2 seconds between student's response and your next instruction)?			
7. Did instructor mix and vary instructional demands (no more than 3 of the same operant/task in a row)?			
8. Were easy and difficult tasks interspersed at the appropriate ratio?			
9. Easy/hard ratio: _____			
10. Did instructor use a natural tone of voice?			
11. Did instructor reinforce at set VR schedule?			
12. VR: _____			
13. Did instructor use 0 second delay prompts for teaching targets?			
14. Did instructor re-present the instruction followed by a 0 second delay prompt when errors occurred?			
15. Did instructor prompt student if no response occurred within 2 seconds for a previously mastered item?			
16. Were prompted trials followed by a transfer trial, easy trial(s), and a check trial?			
17. Did instructor differentially reinforce (better reinforcement) target responses?			
18. Did instructor differentially reinforce (better reinforcement) quicker and more independent responding?			
19. If problem behavior occurred, did instructor not remove the demand and follow through by keeping the demand on?			
20. Did instructor deliver less reinforcement following run through's that required extinction (keeping demand on)?			
_____20=			_____ %

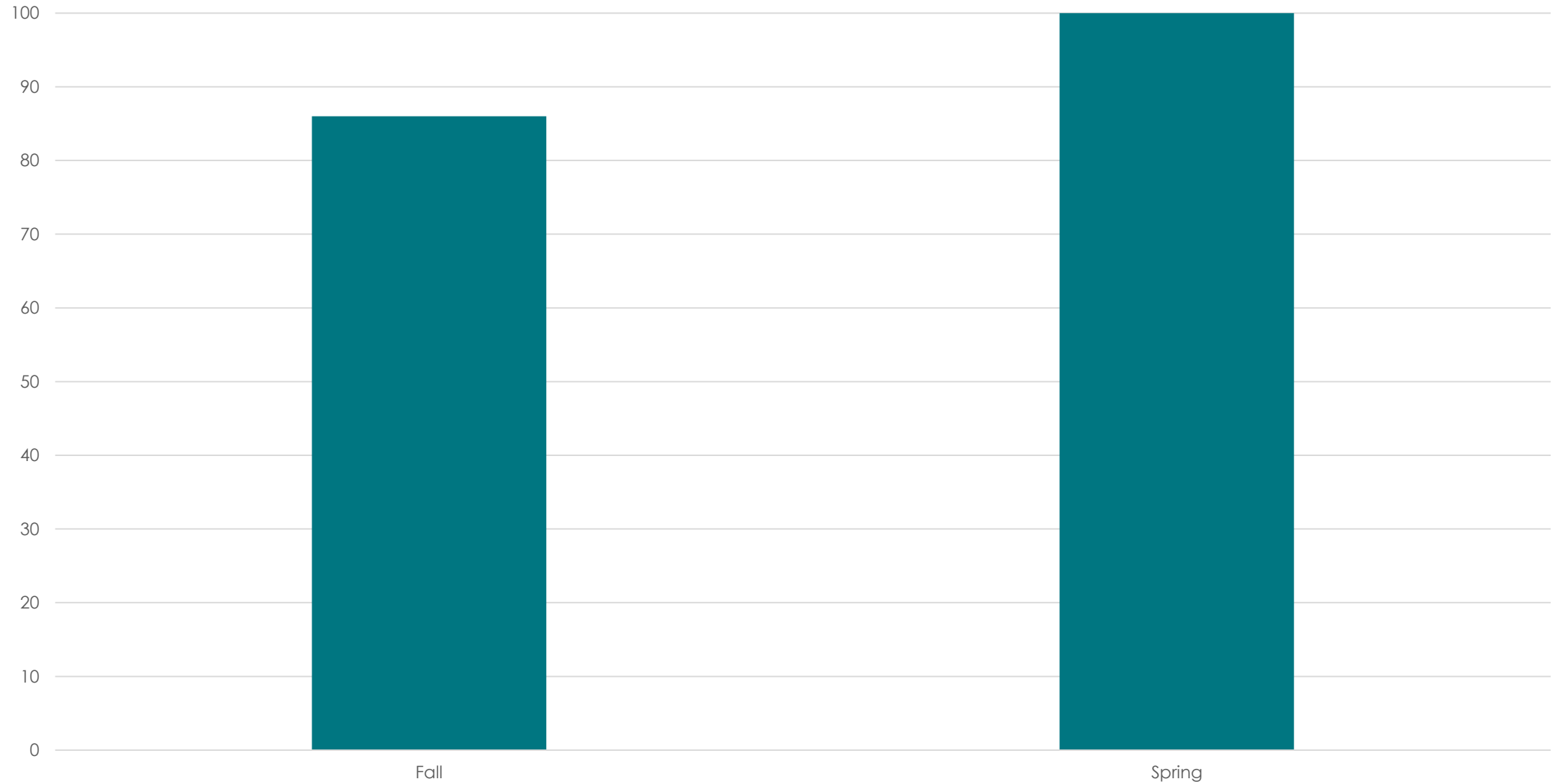
trial	Transcription of demands/ Responses	Number of demands	Timing of trial	Feedback
1.	(T-p Ttt) I R T√ SR+	4	12"	Remember to repeat your SD following the error and before you prompt. Great job remembering your transfer trial and check trial!
2.	E R T R SR+	4	8"	Nice run through of easy and quick responses. Also great example of mixing of the different operants
3.	(Rp Rtt) I R R√ SR+	4	15"	Perfect example of errorless teaching! Nice job Jeanne ☺
4.	T I I (T-p Ttt) R R (T-p Ttt) R T√ SR+	9	22"	Need to repeat SD before prompting. Watch the number of demands. This run through would have been better split up by reinforcing Andrew a little on the first transfer trial and completing the check on the next run through. You may have been able to prevent the second error due to motivation to respond remaining higher with denser reinforcement. His VR is a 3.

# VB-MAPP Pre to Post Mean Change 2017-2018 School Year (N=999)





# VB-MAPP Pre to Post Mean Change 2018-2019 School Year (N=320)



## Parent Support and Effective Communication

- Insuring Parents are informed
- Is there a system of training for parents, caregivers, and other community members that regularly interact with the students?
- Trainings focused on content that is relevant to students' instruction and that allows an increased collaboration and involvement as well as enhance parents' ability to make informed decisions.

# Parent Support and Effective Communication

- Communication is designed to keep parents informed about their child's specific program and progress
- Communication allows parents to provide feedback and information to teacher.

- Informed
- Humble
- Engineering orientation
- Outcome focused

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