

Using evidenced based Applied Behavior Analytic Procedures as a Conceptual Framework for Classroom Staff Training

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Who we are

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Rationale

Consistent with single subject designs; intervention(independent variable) effectiveness cannot be evaluated without examining to what degree the intervention(independent variable) is being implemented as prescribed. (Horner, et al, 2005; Cooper Heron Heward, 2007; Torres, Farely, Cook, 2012, Peterson, Homer, Wonderlich, 1982, Wolery 1994; Gresham, Gansle, Noel, 1993; McIntyre, Gresham, DiGennaro, Reed, 2007; Wheeler, Baggett, Fox, Blevins, 2006; Kazdin, 1998)

Rationale

Delivering interventions to a high degree of treatment fidelity should be key component of any intervention (Copper Heron Heward, 2007; Torres, Farely, Cook, 2012; Wheeler et al, 2006, Miklos, 2015)

Any intervention package should have treatment fidelity/staff training as a key component. (Cooper Heron Heward, 2007; Torres, Farely, Cook, 2012; Peterson et al 1982; Wolery, 1994)

Rationale

The degree/quality in which direct care staff have been trained is a key variable when evaluating staff performance (Green, Rollyson and Passante, 2002)

Despite behavior analytic research on staff training dating into the 1970's, there appears to be a need to ensure that direct care staff are being trained to implement procedures with fidelity. (Parsons, Rollyson and Reid, 2012)

Rationale

Staff trainings should focus on increasing both the individuals verbal behavior(knowledge) but also performance. Verbal behavior trainings are typically done through lecture format. Although important, it is not as effective for teaching performance skills. (Parson, Rollyson and Reid, 2012)

Rationale

Increasing both performance skills and verbal behavior skills are important although when evaluating job performance, performance skills are often weighted heavily

A training package that only increases verbal skills is not sufficient. Typical job performance ratings consist primarily on performance skills, although verbal skills training is most common

Behavior Skills Training

In some form or another Behavior skills training consists of the following... (Cooper, Heron, Heward, 2007; Fisher Piazza, Roane, 2011; Sarakoff and Strumey, 2004; Iwata et al., 2000; Koegel, Russo, & Rincover 1977; Lavie & Sturmey, 2002; Reid & Parsons, 1995; Mueller et al, 2003; Coddington, Feinberg, Dunn, Pace, G. M 2003, Witt, Noell, LaFleur, Mortenson, 1997)

Behavior Skills Training

The four steps

- Instructions
- Modeling
- Rehearsal
- Feedback

Instructions

Provide rationale, instructions, and describe steps of the skill being taught (Parsons, Rollyson, Reid 2012)

If providing written rationale, keep simple (Parsons, Rollyson, Reid 2012; Gwande, 2012)

Often beneficial to provide procedural checklists(Gwande, 2012)

Modeling

Demonstrate the skill being taught (Parsons, Rollyson, Reid 2012)

Serves as an example to replicated

Rehearsal

In role play scenarios, have learners demonstrate with the skill teacher or other learners (Parsons, Rollyson, Reid 2012)

- Practicing the skill before real world implementation removes the naturally occurring reinforcement contingencies
- Roleplaying participants are more forgiving
- Prevents harm to the staff and learner

Rehearsal

This step is often skipped but is critical! (Reid, Parsons, Green, 2012; Parsons, Rollyson, Reid 2012).

Feedback

Review what went well and what they need to work on (Parsons, Rollyson, Reid 2012; DiGennaro, Martens, Kleinmann, 2007; Cooper, Heron, Heward, 2007).

- Reinforce the behaviors you want to see more

Feedback

Correct Errors

- Once errors occur one time, they are more likely to occur without immediate error correction

Immediate is preferred! (Krumhus, Malott, 1980)

Repeat Rehearsal and Feedback steps if necessary

BST Practice

Need a Volunteer



BST Practice-Instructions

Rationale for using a promise reinforcer

- Antecedent intervention that establishes MO for Compliance. Often used to increase the likelihood of compliance with a low probability demand
- Steps
 - Determine a reinforcer that the student will want at that moment. (Example: the student just had a salty snack and likes to have a drink)
 - Hold the reinforcer so the student can see it but do not make it too obvious. (You don't have to wave it around and say "Look what I have etc".)
 - Give the instruction (example: "It's time to _____", or "Come here we're going _____")
 - If he follows the direction, he gets the reinforcer.
 - If he doesn't follow through the first time the direction is given, he does not get the reinforcer but the direction needs to be followed.

BST Practice-Instruction

Example of Promise Reinforcer Procedural Fidelity Checklist

Note the simplicity of the steps

**PROMISE REINFORCER
Procedural Fidelity Checklist**

Date: _____ Instructor: _____ Student: _____

Observer 1: _____ Observer 2: _____ IOA% _____

	YES	NO	N/A
1. Did instructor determine a reinforcer that Student wanted at the moment?			
2. Did instructor hold the item so that it was visible to Student just before and as instructor presented instruction?			
3. Did instructor present a clear direction Student was to follow? (i.e. "It's time to _____")			
4. If Student complied with instruction within 4 seconds did instructor immediately deliver the promise reinforcer?			
5. If Student did NOT follow the instruction within 4 seconds did instructor remove the item and follow through on the demand given (repeat instruction and prompt as necessary until compliance without problem behavior)?			
6. If follow through was needed, did instructor make sure to have Student engage in at least 2 more easy responses before instructor re-instated reinforcement (and this reinforcement was not the original promise reinforcer)?			
7. Did instructor provide better reinforcement for those trials with immediate compliance free of problem behavior?			
Notes:	____ / 7		
	Percentage of 7's:		

BST Practice

Modeling

Rehearsal

Feedback

Classroom Information

Erhin's Classroom

- 9 different staff members throughout the school year
- 5 Students
 - 5 Additional students responsible for consultation
- Low Level 1-> Mid Level On VB MAPP

Classroom Information

Sheri's Classroom

- 11 different staff members throughout the school year
- 10 Students
- Low Level 1-> Mid Level 3 on VB MAPP

Our experience

Classrooms are across the hall the from each other

Each teacher has their own caseload and are responsible for their students

Despite this, students and staff members are frequently shared between the two classrooms

- Number of students, staff break times, grouping of students created this need

Our Experience



Our Experience



Our Framework

Although our training package did not follow Behavior Skills Training sequence, there are elements of Behavior Skills Training in each component of our training package

Behavior Skills Training was used as a conceptual framework in developing our training package

These elements of Behavior Skills Training will be highlighted through this presentation

Key Components

Trainings

Instructional videos

Competency check

- Data samples

Treatment fidelity

Tests

Trainings

Trainings before school; 2 times per month

2 hour delays were used for longer trainings

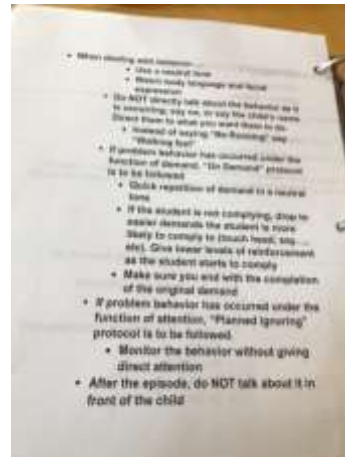
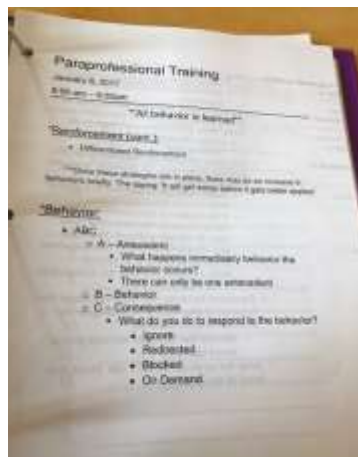
In-service trainings were held periodically Administration support

Bootcamp

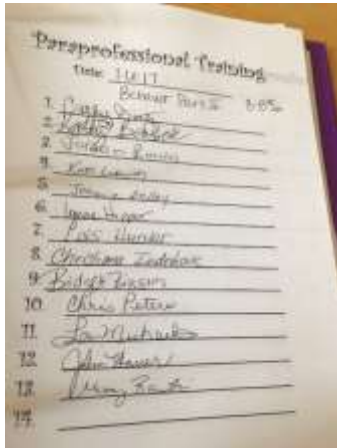
Based off need

BST Component- Instruction & Modeling

Trainings



Trainings



Paraprofessional Training Schedule

We will have meetings the Friday's opposite the monthly building meetings.

We will start the meetings @ 1:30 PM. On these days, you may leave at 2:30 PM.

If there is a schedule change, you will be notified.

Friday, September 9
Friday, September 23
Friday, October 7
Friday, October 21
Friday, November 4
Friday, November 18
Friday, December 2
Friday, December 16
Friday, January 6
Friday, January 20
Friday, February 3
Friday, February 17
Friday, March 3
Monday, April 3
Friday, April 20
Thursday, May 4
Friday, May 19

Instructional Videos

Created Staff Training videos to Model skills

Used videos available at

www.pattan.net/videos/autism

BST Component- Modeling

Instructional Videos



Instructional Videos

Staff started creating their own videos to help with training
This provided a unique opportunity for Modeling, Rehearsal,
& Feedback

Modeling

- Videos served as a model for new staff

Instructional Videos

Rehearsal

- Staff had the opportunity to practice/model the skills in the training videos

Feedback

- Teachers gave feedback during and after the creation of the videos reinforcing accurate performance as well as correcting mistakes

BST Component- Modeling, Rehearsal, & Feedback

Video



Data Samples

Using sample data, staff had to demonstrate that they were able to complete data collection and graphing without errors

BST Component- Rehearsal & Feedback

Example of data

The image shows a data collection table from a notebook. The table has several columns and rows. Some rows are highlighted in green. A red box highlights a specific row. At the bottom of the page, the number '+6.5' is circled in red.

Area	Target	Actual	Variance
Area 1	100	100	0
Area 2	100	100	0
Area 3	100	100	0
Area 4	100	100	0
Area 5	100	100	0
Area 6	100	100	0
Area 7	100	100	0
Area 8	100	100	0
Area 9	100	100	0
Area 10	100	100	0
Area 11	100	100	0
Area 12	100	100	0
Area 13	100	100	0
Area 14	100	100	0
Area 15	100	100	0
Area 16	100	100	0
Area 17	100	100	0
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Area 97	100	100	0
Area 98	100	100	0
Area 99	100	100	0
Area 100	100	100	0

Treatment fidelity

Ensuring that interventions are being implemented to a high degree of treatment fidelity should be critical component of an intervention (Copper Heron Heward, 2007; Horner et al 2005)

Initially, it may be uncomfortable for both parties, however, don't allow this to prevent you from watching

Treatment Fidelity

MUST PLAN FOR THIS! Procedural drift will occur!

- Don't forget maintenance-reinforce the good stuff

BST Component- Rehearsal & Feedback

Treatment Fidelity

Detailed check lists(fidelity checklists) are great tools(Gawande, 2010)

- Provides you with detailed steps of the intervention
- Structures your feedback
- More objective than simply watching

Treatment Fidelity

Some Reminders when providing feedback

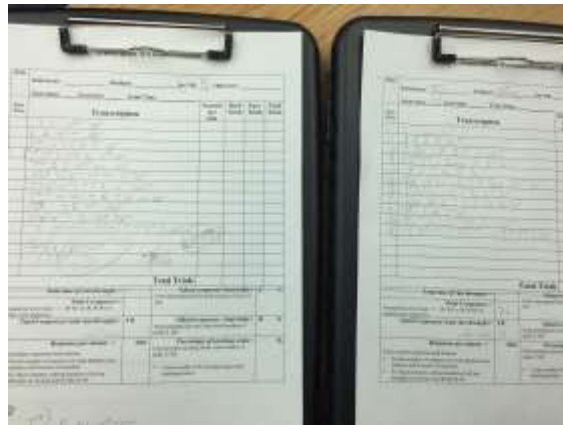
- Stop errors immediately
 - Once an error occurs one time, it is likely that it will occur again
- Don't forget to reinforce all the good things that someone is doing too!
- Be up front and honest, you can't fake it forever
 - Staff typically perform the same whether or not they are aware you are observing. (Coddling, Livanis, Pace and Vaca, 2008)
 - "Sneaky" observations can decrease trust, so avoid whenever possible.

Treatment Fidelity

- Focus on the big things first
 - If a staff is struggling at implementing a procedure, do not “nitpick” every little detail
 - Focus on the really important things first
 - Deliver feedback immediately (Brinko, 1993)

BST Component-Feedback

Treatment Fidelity



Treatment Fidelity

INSTRUMENTAL
INSTRUMENTAL

1. How often do you use the program?
 2. How often do you use the program with fidelity?
 3. How often do you use the program with fidelity?
 4. How often do you use the program with fidelity?
 5. How often do you use the program with fidelity?
 6. How often do you use the program with fidelity?
 7. How often do you use the program with fidelity?
 8. How often do you use the program with fidelity?
 9. How often do you use the program with fidelity?
 10. How often do you use the program with fidelity?
 11. How often do you use the program with fidelity?
 12. How often do you use the program with fidelity?
 13. How often do you use the program with fidelity?
 14. How often do you use the program with fidelity?
 15. How often do you use the program with fidelity?
 16. How often do you use the program with fidelity?

13/16

Transcription

Item	Yes	No	Total
1. How often do you use the program?			
2. How often do you use the program with fidelity?			
3. How often do you use the program with fidelity?			
4. How often do you use the program with fidelity?			
5. How often do you use the program with fidelity?			
6. How often do you use the program with fidelity?			
7. How often do you use the program with fidelity?			
8. How often do you use the program with fidelity?			
9. How often do you use the program with fidelity?			
10. How often do you use the program with fidelity?			
11. How often do you use the program with fidelity?			
12. How often do you use the program with fidelity?			
13. How often do you use the program with fidelity?			
14. How often do you use the program with fidelity?			
15. How often do you use the program with fidelity?			
16. How often do you use the program with fidelity?			
Total Items	8	3	

Total Program = 21
 Total of responses = 21
 Total of responses = 21

Tests & Competency Checks

Served the purpose to ensure that staff were able to demonstrate and have knowledge in key areas

Tests & Competency Checks

Broken down into three different areas:

- Verbal Operant
- Classroom Procedures
- Program Identification
- *An additional competency check was provided only once on data collection, see previous slide for Data Sample

BST Component- Feedback

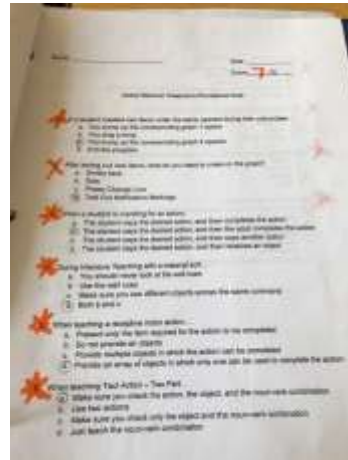
Tests and Competency Checks

Allowed opportunity for staff to demonstrate verbal and performance skills

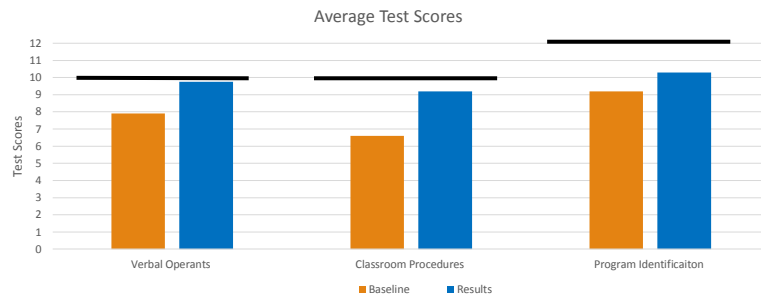
Following tests, future trainings were planned based off of the results of tests

- If staff continuously were unable to define reinforcement on the test, subsequent trainings were focused on reinforcement

Tests and Competency Checks



Results - Staff Performance



— Indicates Max Points Possible

Results - Staff Performance

- Verbal Operants
 - N=12
 - Baseline- 7.9/10
 - Results- 9.75/10
- Classrooms Procedures
 - N=12
 - Baseline- 6.6/10
 - Results- 7.4/10

Results - Staff Performance

- Program Identification
 - N-13
 - Baseline- 9.2/12
 - Results- 10.3/12

Limitations

No true baseline

- Participants could have been exposed to content prior to testing
- For some staff who started mid year, already had trainings prior to testing

Limitations

Extra credit

- Extra credit was given for exemplary performances
- May hide lower performing staff, but remember what the goal is!
 - Provided for reinforcement of staff behavior not for a clinical study

Results - Student Learning

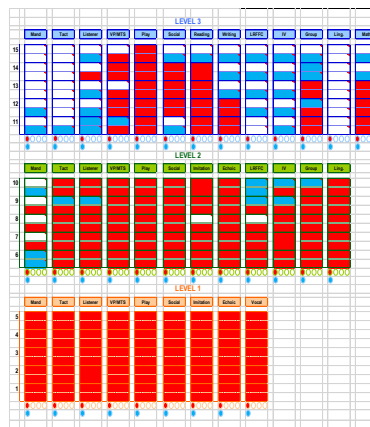
Across 15 students, 203 Milestones were acquired per individual. VB MAPPS Assessment were given in fall and spring

- Approximate average of 13.5 milestones per student

5029 individual skills were mastered across 15 students

- 335.27 skills per student

Results - Student Learning



Results - Classroom Functioning

Approximately 50+ IT and Mand sessions per day

25 different data binders

Each student is included in lunch, recess, science/social studies and some specials

- NO ONE GOT LOST!

Classroom Atmosphere

Difficult to measure, but in general staff and students had fun!

Without being confident in procedures due to effective BST Training; student success would not be possible and staff would not have accessed this reinforcement

Classroom Atmosphere



Classroom Atmosphere



Classroom Atmosphere



Pitfalls

Staff Change

- Having a systematic training model helps get new staff trained quickly

Difficult to train staff

- More training
- Reinforcement

Administration support

- Having a detailed plan helps get administration on board

Conclusions

Staff training should be a planned component of any program

Behavior Skills Training is well supported in the behavior analytic research

Even if you cannot strictly follow a Behavior Skills Training sequence, using it as components of a training package is still proven to be effective

Questions?

Thank you to all the classroom staff and administration for being willing participants throughout the year



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