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

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Who we are

Erhin Ritchey, BS- Classroom Teacher
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Tom Miller, MS, BCBA- PaTTAN AI ABA Supports
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; Codding, Feinberg, Dunn, Pace, G. M 2003, Witt, Noell, LaFleur, Mortenson, 1997)
Behavior Skills Training

The four steps

stm Instructions
stm Modeling
stm Rehearsal
stm 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
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 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

Instructional Videos

Created Staff Training videos to Model skills

Used videos available at www.pattan.net/videos/autism

BST Component- Modeling
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

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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
Treatment fidelity

Ensuring that interventions are being implemented to a high degree of treatment fidelity should be a 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

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. (Codding, 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

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

Average Test Scores

- 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 - 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
References


References


References


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