University of Houston Clear Lake

CADD
CENTER FOR AUTISM AND DEVELOPMENTAL DISABILITIES

Job-Related Social Skills of Adults with Autism: Current Research and Practice at the University of Houston, Clear Lake

Dorothea C. Lerman, Ph.D., BCBA-D

"*My son was diagnosed with Asperger syndrome as a child. He has graduated from High School. He failed success at additional education and also at any job placement with the department of rehabilitative services. He can drive locally; now at age 27, he would like to do something with his life but has not found anywhere he can succeed. His days are filled with staying at home watching two dogs, tv and video games. Are there any resources to help him toward a more socially productive life?*" – Comment posted on podcast website, People's Pharmacy 10/2/15

My Collaborators

- Carolyn Grob
- Channing Langlinais
- Courtney Laudont
- Trena Rouse
- Loukia Tsami
- Natalie Villante
- Bridgette White
- Dan Wright

Issues and Problems in Employment

Employment of Individuals with Disabilities

- Employment by disability (Shattuck, 2012)
  - 55% Autism Spectrum Disorder
  - 68% Intellectual Disabilities
  - 86% Speech Impairment
  - 93% Learning Disability

- Adults with ASD:
  - Earn less and work fewer hours (Burgess & Cimera, 2014)
  - Rely on other adults for support

- Outcomes flat/declined across 10 yrs; access to services had minimal impact (Taylor & Mailick, 2014)

Types of Employment Services

- Vocational Rehabilitative (VR) Services
  - Largest U.S. program to provide employment services
  - "State of the states report" (Burgess & Cimera, 2014)

- Sheltered Employment
  - "Train-then-place" approach
  - "Negative 'value-added'" service (Cimera, 2011)
- Supported Employment
  - "Place-then-train" approach
  - Individual / group

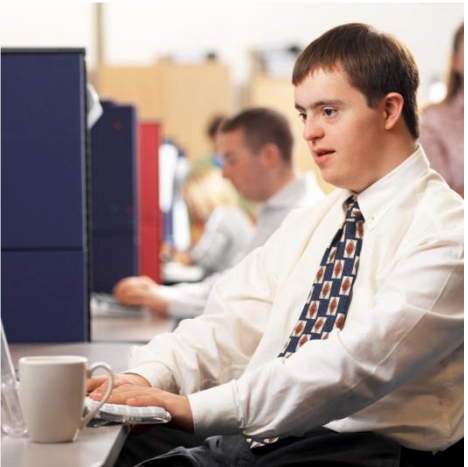
Why Vocational Difficulties?

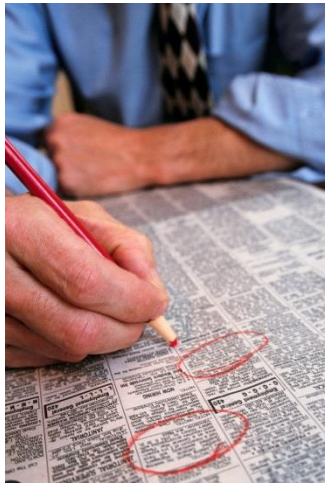
- *Verbal report* of potential factors (Baldwin et al., 2014; Hurlbutt & Chalmers, 2004; Muller, Burton, & Yates, 2003)
  - Inadequate job training
  - Difficulty interacting with supervisors/co-workers
  - Unclear expectations

Research on Vocational Interventions for Individuals with Autism

- Focus on those with more severe disabilities
- Reliance on indirect/correlation measures

Potential Targets for Vocational Assessment and Intervention





Potential Targets: What Should We Teach?

Some Examples

- Securing Employment
  - Identifying desirable vocations
  - Completing applications
  - Interviewing
- General Vocational Skills
  - Following instructions
  - Managing time
  - Navigating job site
- Job-Specific Skills
- Job-Related Social Skills
  - Asking for assistance
  - Responding appropriately to feedback
- Hygiene/Grooming

Potential Targets: What Do Employers Care About Most?

Surveys:

- Follows instructions
- Shares information
- Respects others / Offers to help
- Requests assistance
- Clarifies instructions
- Responds appropriately to criticism
- Is dependable/On time
- Shows personal integrity/honesty

(e.g., Foss & Peterson 1981; Ju et al. 2012; McConaughy et al 1989; Salzberg et al. 1986)

Potential Targets: What Do Employers Care About Most?

Reasons For Termination:

- Antisocial/irresponsible behavior
- Lack of social awareness
- Interpersonal relations

(e.g., Butterworth & Strauch, 1994; Ford et al., 1984; Greenspan & Shoultz, 1981; Mueller, 1988)

Observation/Interviews About Problems:

- Interactions w/ supervisors & co-workers
- Disruptive/distractive behavior

(e.g., Cheney & Foss, 1984)

Potential Targets: What Should We Teach?

Some Examples

- Securing Employment
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How Do We Identify Targets? Assessment of Job-Related Social Skills

Assessing Job-Related Social Skills

- Caregiver or Staff Interviews/Checklists
  - Scale of Job-Related Social Skill Performance (SSSP;Bullis et al., 1993)

Positive Social Behavior *How well does the individual…*	*Proficient*	*Somewhat Proficient*	*Fair*	*Somewhat Inept*	*Inept*
1. Ask for assistance from work supervisor if problems are encountered with work materials or tools?	5	4	3	2	1
2. Ask for assistance from co-workers to complete a work task?	5	4	3	2	1
3. Ask work supervisor for clarification in completing a new job?	5	4	3	2	1
4. Ask work supervisor for assistance after encountering problems in his or her job?	5	4	3	2	1

Assessing Job-Related Social Skills

- Client Verbal Report (Self-report/Knowledge-based tests)

Assessing Job-Related Social Skills

Test for Interpersonal Competence for Employment (TICE; Bullis & Foss, 1986)

Number 25. If your supervisor gives you several instructions and you forget one, you should:

a. ask another worker for help.

b. ask him to repeat the instructions.

c. ask for a different job.

Repeat the item.

Number 26. If you are unhappy because your supervisor told you to do a new job, you should:

a. ask why you have to do it.

b. say you want to do your old job.

c. ask your supervisor to explain the new job.

Assessing Job-Related Social Skills

Scale of Job-Related Social Skill Knowledge (SSSK;Bullis et al., 1993)

7. Mary's boss corrected her for mistakes in her work. Mary was very concerned and wanted to keep the boss happy. She asked him several times during the day if her work was OK. Finally the boss got angry and said "Mary you're really bothering me!"

Effective	3	• *Apologize and explain to the boss that you were just checking to be sure that you did your work correctly.*
Fair	2	• *Don't say a word to the boss: just go back to work before s/he really gets angry.*
Ineffective	1	• *Go back to work and let the boss know how upset you are by giving him/her dirty looks.* • *Become upset and cry to show the boss how sincere you are in working hard.* • *Become physically sick in response to the comment by the boss.* • *Wait till the boss turns around and give him/her the finger.* • *Complain loudly to your co-workers about the boss.* • *Get angry at the boss and yell at him/her because you were only trying to do your job properly.*

Assessing Job-Related Social Skills

Problems with Questionnaires and Tests

- May not correspond with actual performance
- Others' knowledge may be limited
- Verbal report shown to be unreliable

Assessing Job-Related Social Skills

Barriers to Direct Assessment

- Limited access to job sites
- Restricted evocative situations

Assessing Job-Related Social Skills

- What About Analog???

Clinic-Based Vocational Social Skills Assessment

Lerman, White, & Grob (under review)

- Goal: Assess skills efficiently under naturalistic conditions
- Employee "workroom," "supervisor's office," "break room"
- Supervisor absent; all sessions videotaped
  - "I will be in my office; let me know if you need anything"
- Two 3-hour visits (10- to 15-min work sessions)

Clinic-Based Vocational Social Skills Assessment

Typical Tasks

- Folding shirts
- Rolling/sorting silverware
- Sorting objects
- Stuffing envelopes
- Stapling papers
- Alphabetizing books/folders/envelopes
- Cleaning room
- Stocking shelves
- Computer-related jobs (data entry, web searches, word processing)

Clinic-Based Vocational Social Skills Assessment

Response Measurement[1]:

- Confirming statements
- Requests for help - task
- Requests for help - materials
- Response to corrective feedback
- Notification of task completion
- Inappropriate comments/behavior
- On-Task/Task Accuracy
- Monitoring time

[1]Drawn from Butterworth & Strauch (1994); Ju, Zhang, & Pacha (2012); Montague & Lund (2009); Partington & Mueller (2015) and others

Clinic-Based Vocational Social Skills Assessment

Evocative Situations (min. three times per assessment):

- Clear Instructions Only (control)
- Vague Instructions
  - "Sort this;" "Stock these shelves;" "alphabetize"
- Task component not in repertoire
  - Computer log-in; computer tasks
- Materials missing/broken, equipment malfunctions
  - Missing vacuum; run out of staples/napkins; shredder jams
- Supervisor corrects work
- Not enough work for time allocated
- Break

Pilot Clinic-Based Vocational Social Skills Assessment

Additional Situations:

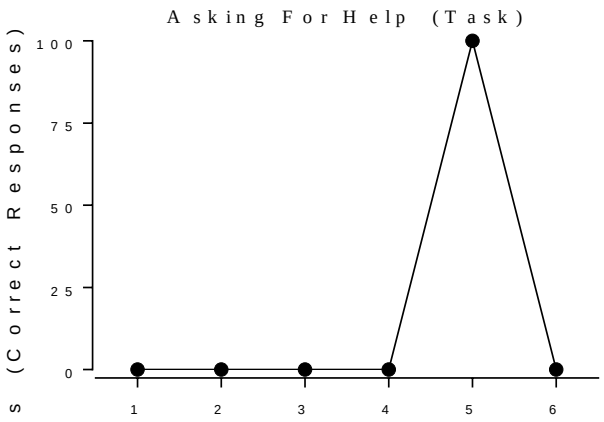
- Multiple tasks (w/ & w/o written list)
- Supervisor/peer present vs absent
- "Time pressure"
- Reinforcement for task completion
- Brief behavioral skills training

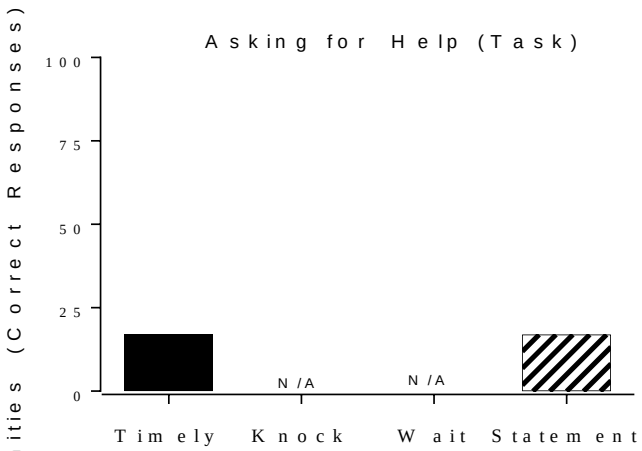
Lerman, White, & Grob (under review)

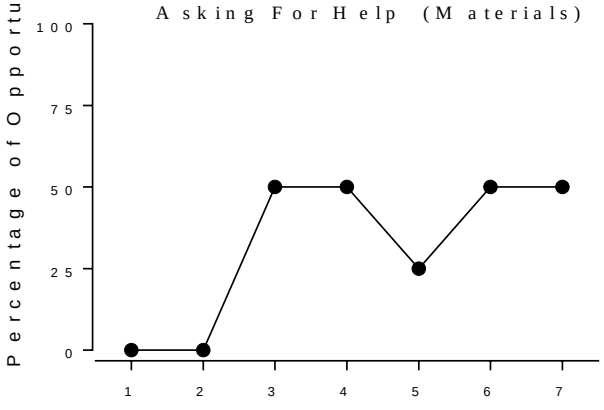
8 Participants

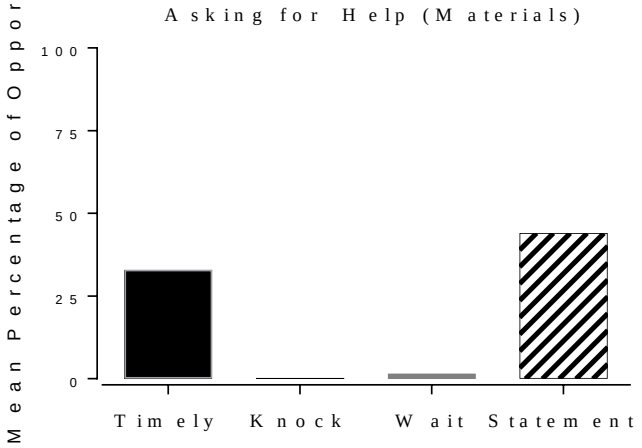
Representative Results:

Adam – age 20 ASD and ID



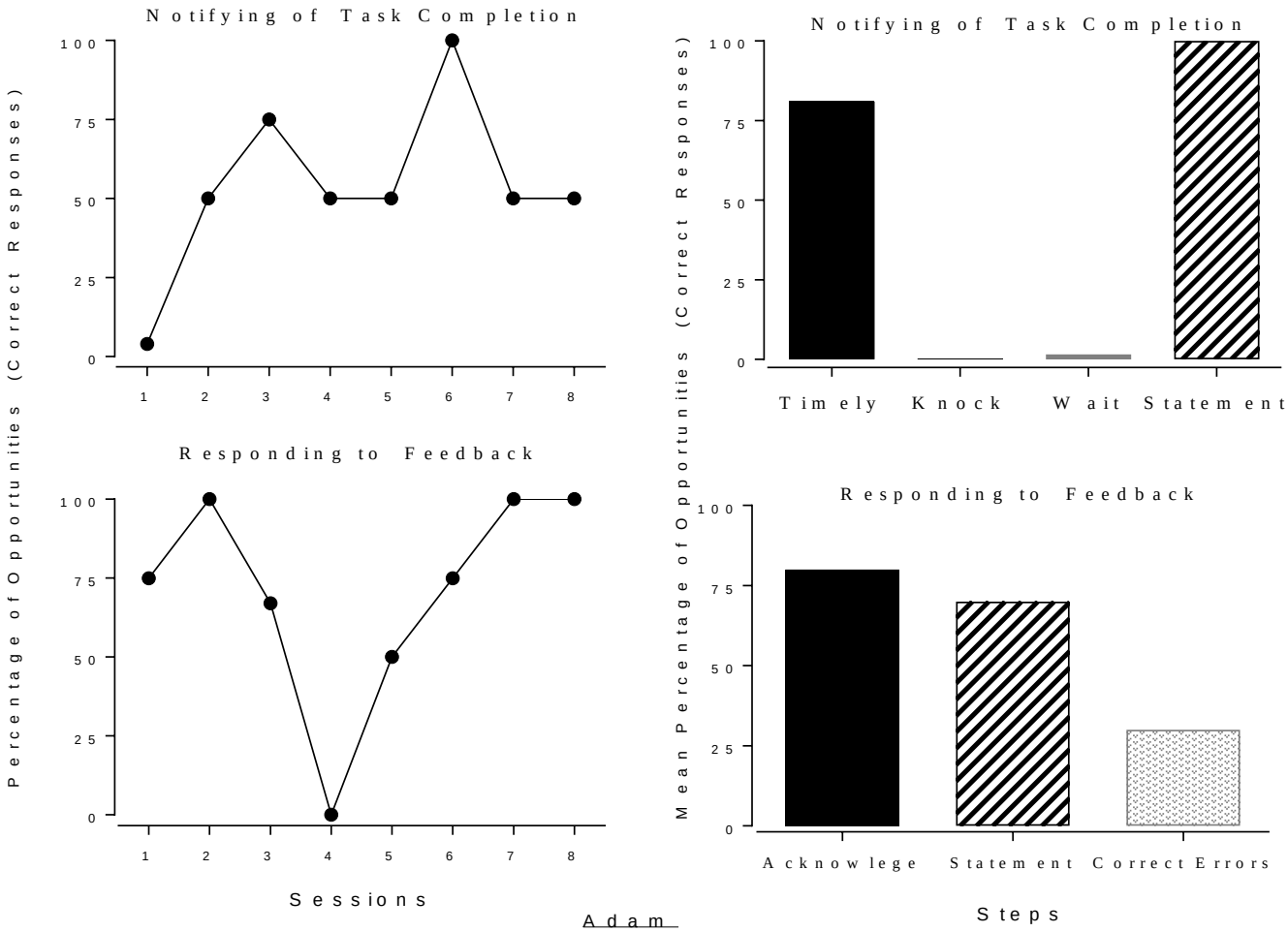






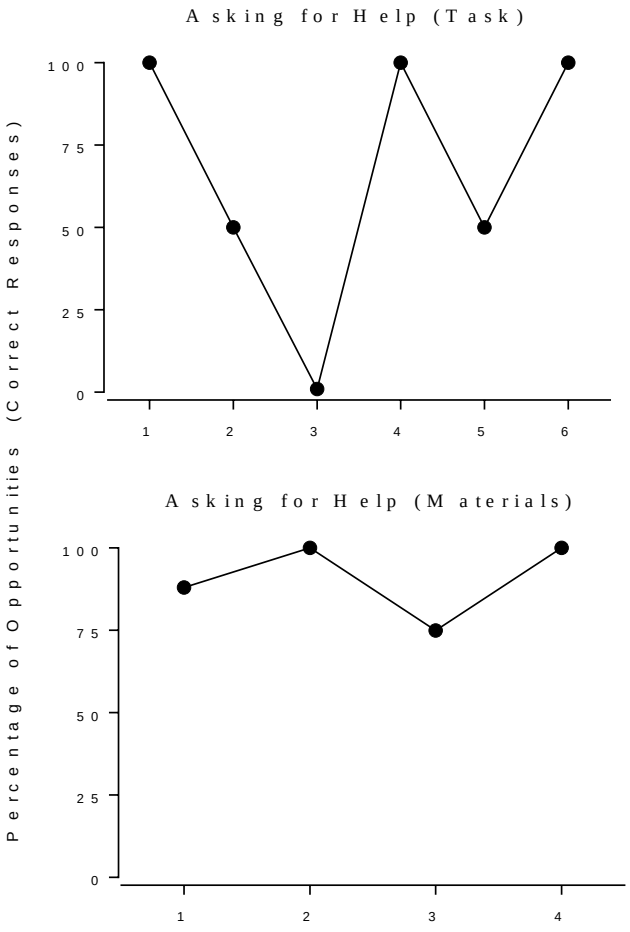
Adam

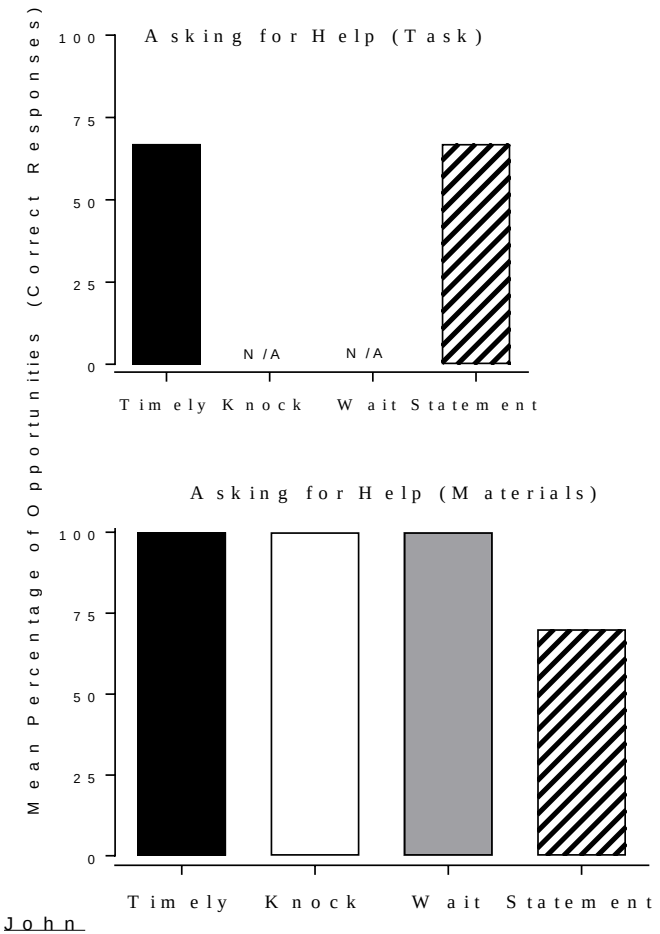
Representative Results: Adam



Representative Results:

John– age 27
ASD;
Enrolled in college courses;
volunteer experience





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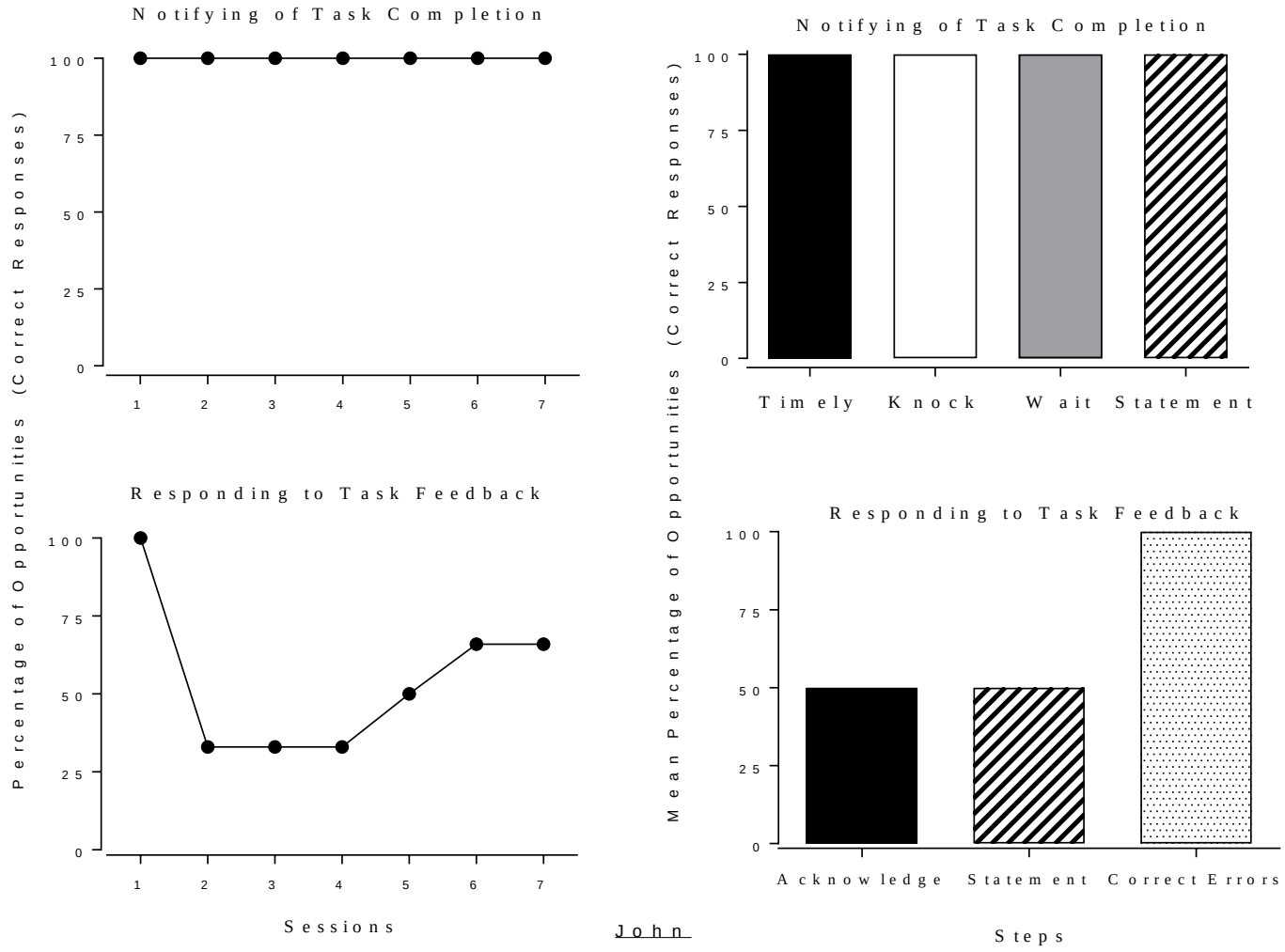

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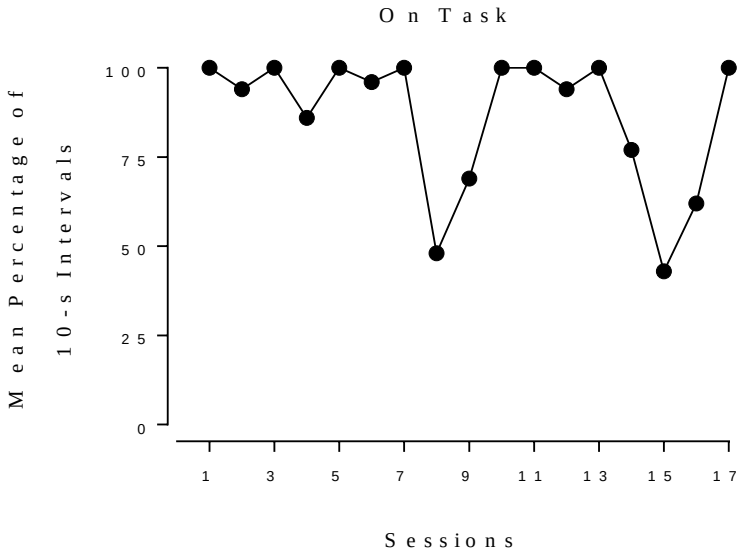

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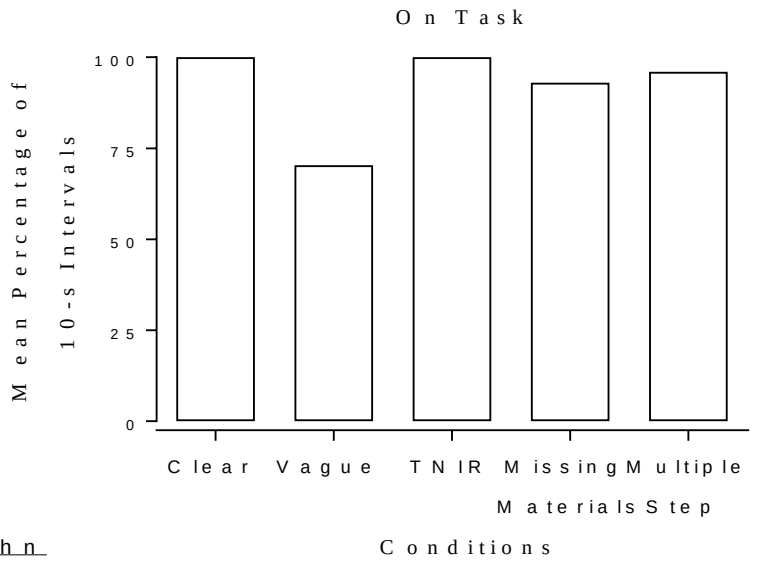

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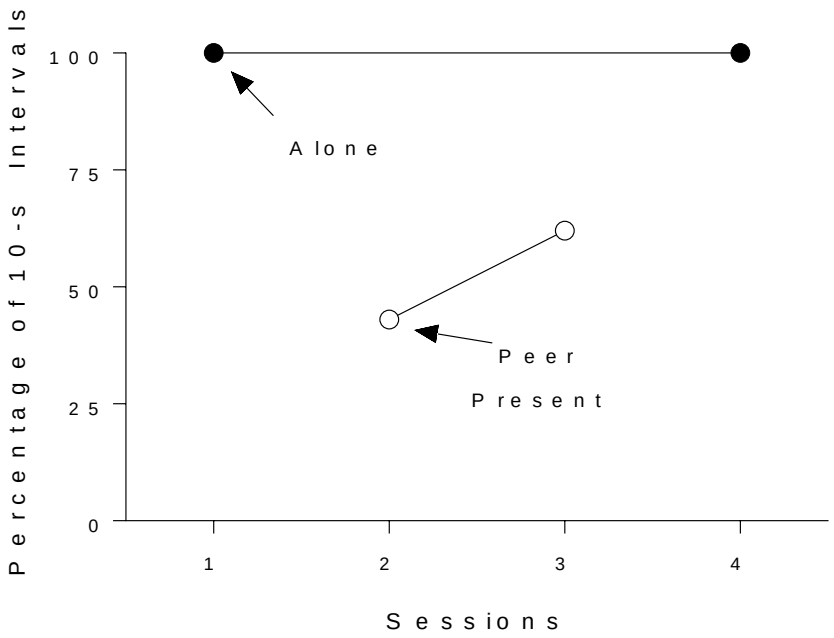
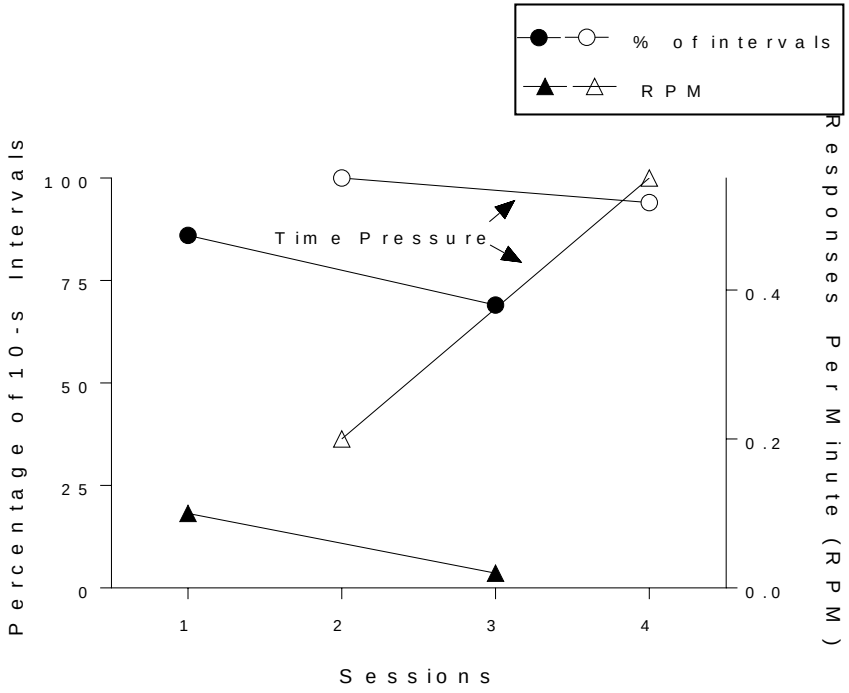




- General Findings for 8 Initial Participants:
  - Inconsistently used confirming statements
  - More likely to ask for help with materials than with tasks
  - Notified supervisor when finished
  - Inconsistently corrected errors
  - On-task for majority of intervals
  - Little or no inappropriate behavior

- Recent Refinements
  - Additional response components
  - Variations of corrective feedback (vague/conflicting)
  - Additional problem solving opportunities
  - Piloting intervention

- Case Examples for Assessment and Intervention

  - Steve: age 27 years, ASD, A.A in Criminology & A.A.S. in Information Technology Security

  - Allison: age 19 years, ASD, ADHD

Vocational Intervention

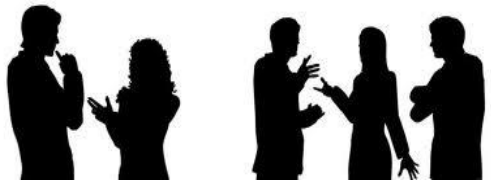
Current Intervention Approach

Grob, Lerman, Langlinais, & Villante (in progress)

- Behavioral Skills Training (BST)
- Stimulus (Text) Prompts
- Vocal Prompts
- Feedback
- Tangible reinforcement

Behavioral Skills Training

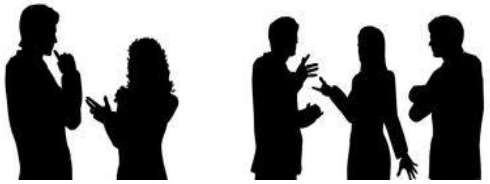
- Components
  - Written/Spoken Instruction
  - Examples / Modeling
  - Practice (Role Play)
  - Feedback



- Effective for a variety of job-related skills:
  - Office, application, & interview skills
  - Interacting with supervisor (Argan, Salzberg, & Stowischek, 1987; Gear et al., 2011)
  - Providing/receiving criticism or compliments (Whang, Fawcett, & Mathews, 1984)
  - Accepting instructions (Whang, Fawcett, & Mathews, 1984)
  - Decreasing off-task behavior (Palmen & Didden, 2012)

Behavioral Skills Training

- Continue until reach performance criteria



- “Test” by returning to relevant assessment situation(s)

Stimulus (Text) Prompts

- Used during “tests” immediately following BST
- Text/pictures to cue participant
- Prompts faded if possible

Stimulus (Text) Prompts

I understand.
I got it.
That makes sense.

I can do that.
I will do that.
Consider it done.

Stimulus (Text) Prompts

"Got it. I will do it the way you *told* me."

"I will do it just the way you *showed* me."

Stimulus (Text) Prompts

Can you show me how?

Could you demonstrate it?

I need a model.

How do I do it?

Stimulus (Text) Prompts
Problem Solving

Have I done this task before?

Did the supervisor give an example ?

BST “Booster”

- Return to BST if performance criterion not met during “tests”
- Continue “tests” once BST performance criterion met

Vocal Prompts

- Introduced during “tests” if performance criterion not met following BST booster
- “Supervisor” provides verbal prompt immediately prior to work session

Feedback

- Introduced during “tests” if performance criterion not met (or fails to maintain) with stimulus/response prompts

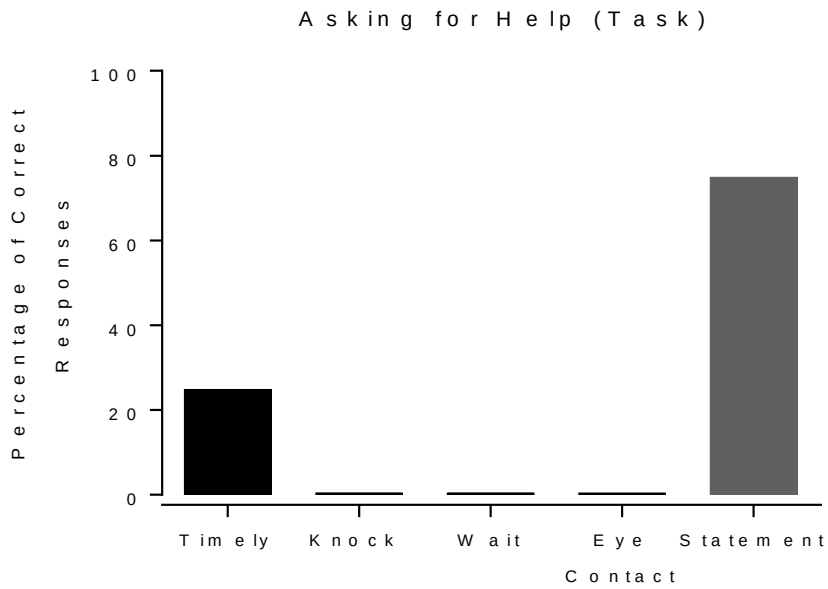
- “Supervisor” provides immediate feedback
  - Descriptive Praise
  - Correction

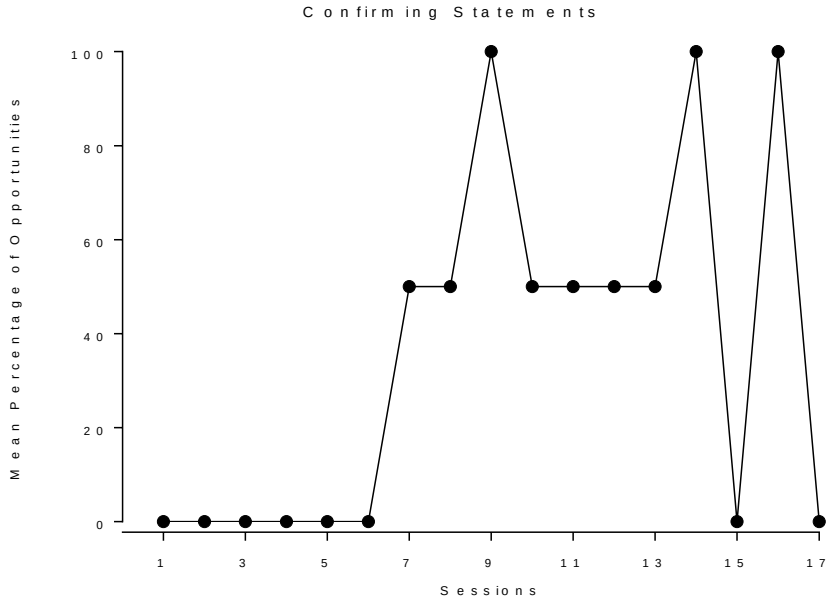
Tangible Reinforcement

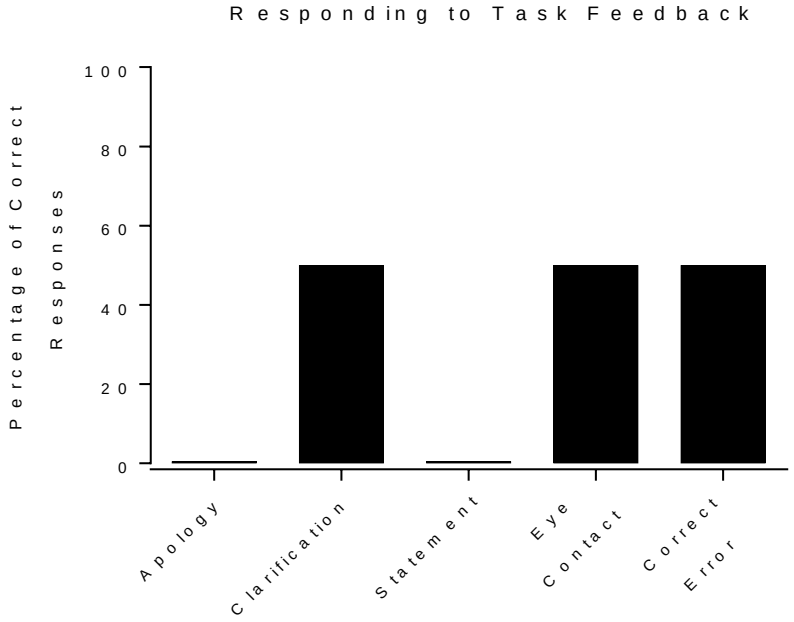
- Introduced during “tests” if performance criterion not met (or fails to maintain) under prior conditions

- “Supervisor” provides immediate:
  - Tangible (e.g., $) + Descriptive Praise
  - Correction

Assessment Results: Steve

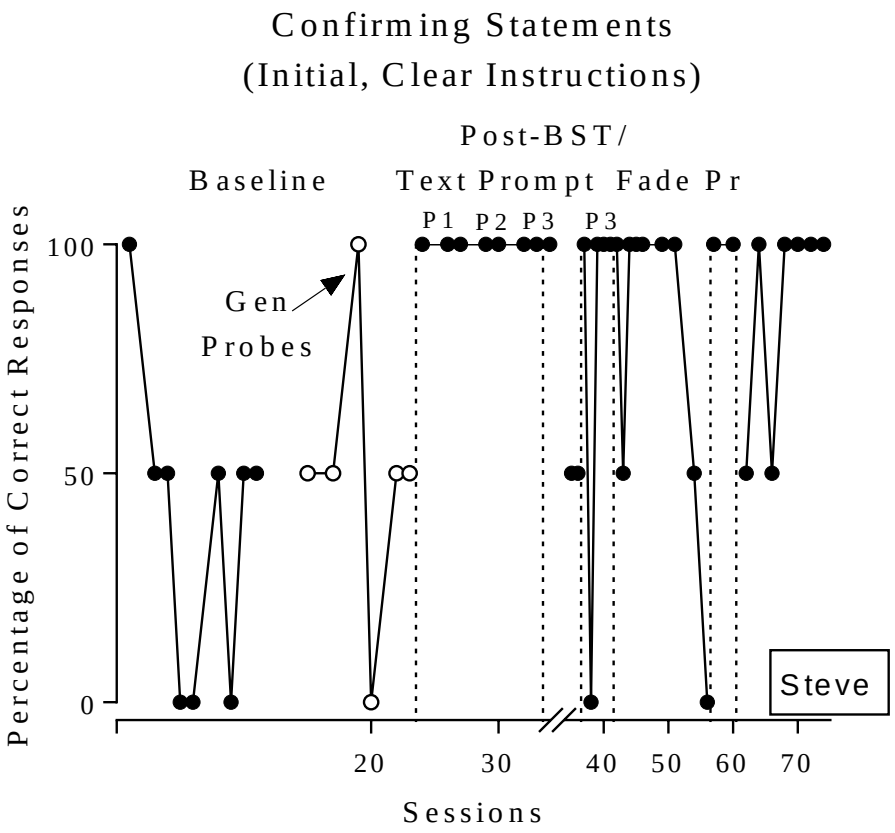






Intervention Targets: Steve

- Confirming Statements
  - Initial clear instructions
  - Initial vague instructions
  - Corrective feedback
- Ask for Task Model
  - Initial vague instructions
- Apologize
  - Corrective feedback


Confirming Statements
(Initial, Clear Instructions)
Post-BST/
Baseline
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P1 P2 P3 P3
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Percentage of Correct Responses
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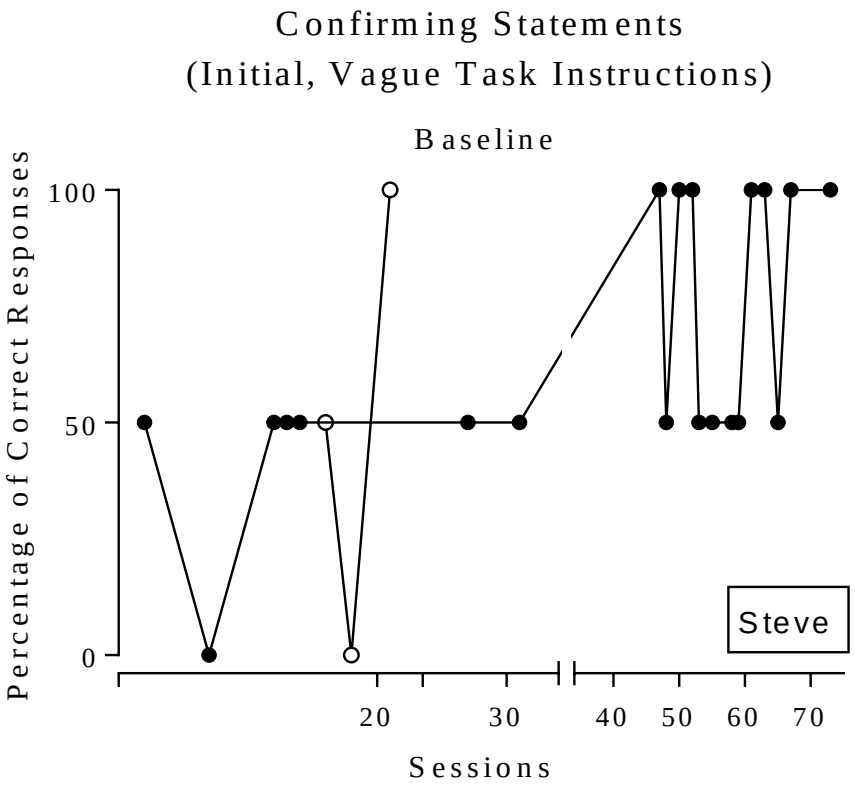
Confirming Statements
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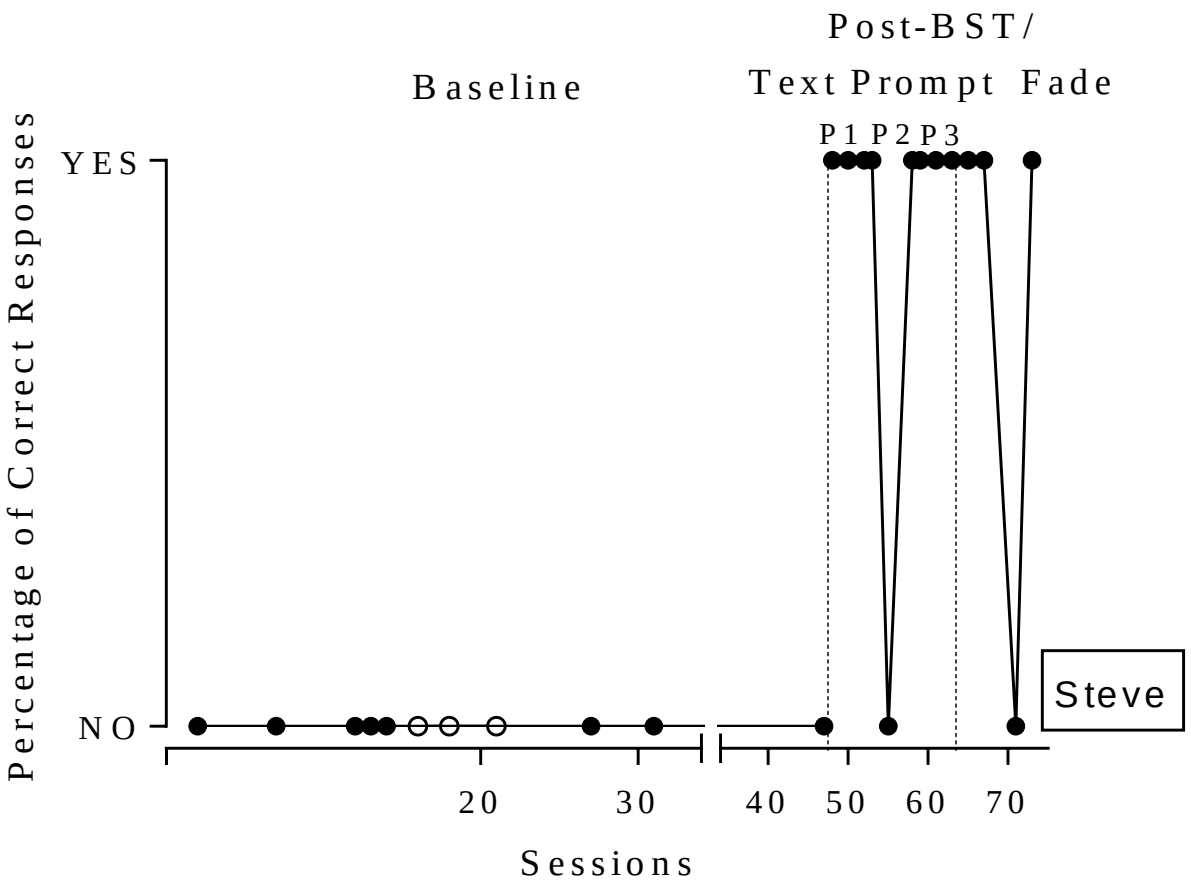
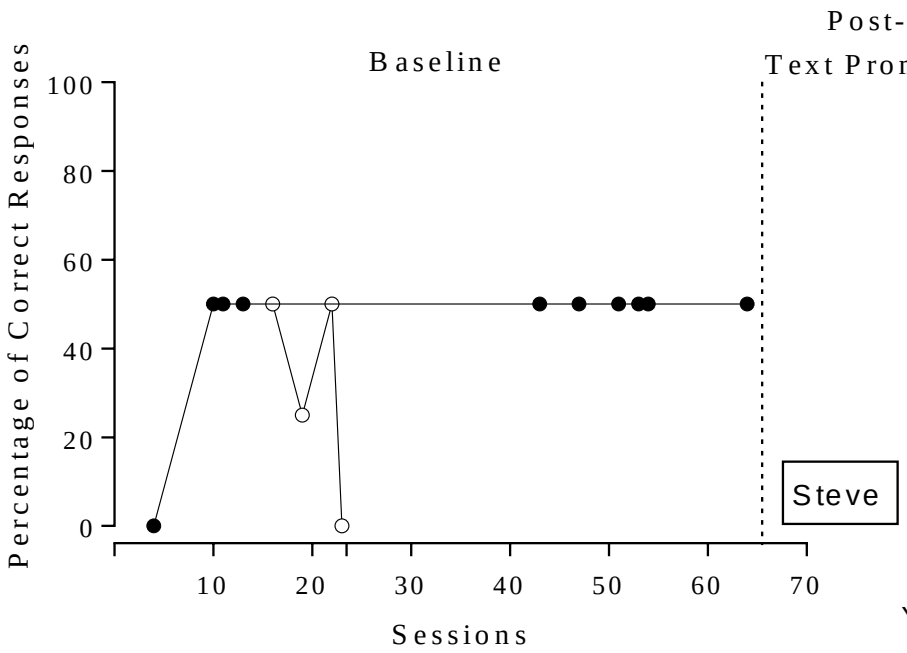
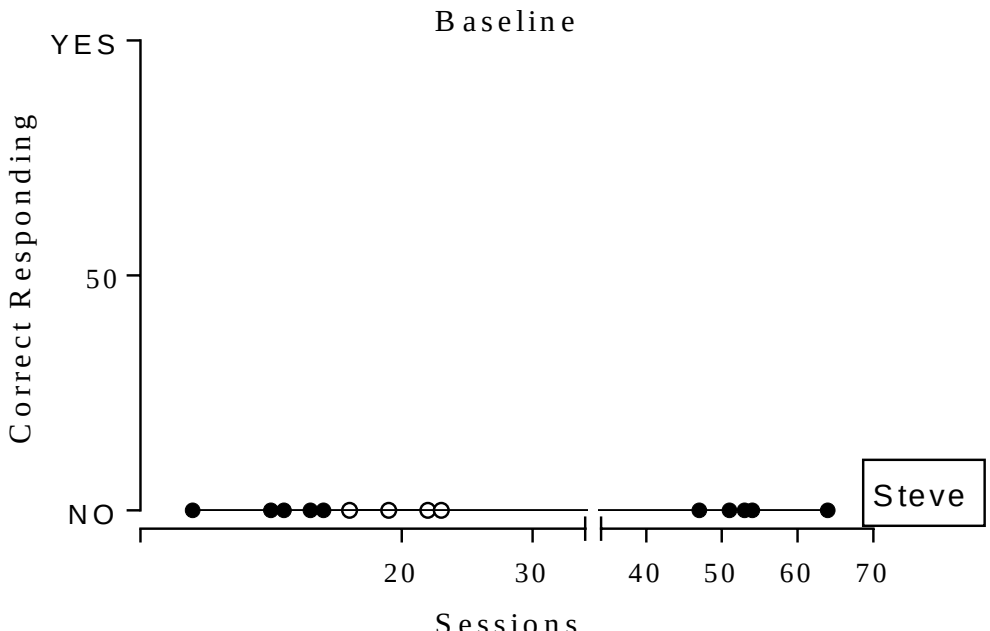
Ask for a Task Model
(Initial Vague Instructions)



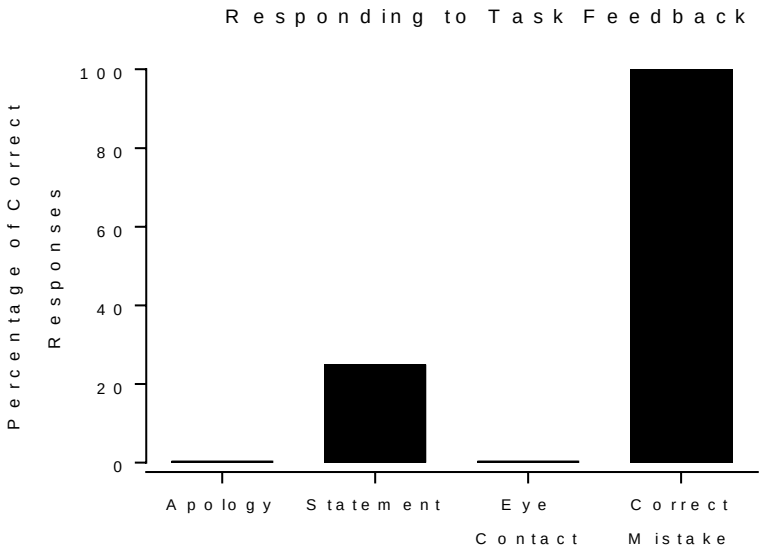
Confirming Statements
(Corrective Task Feedback)

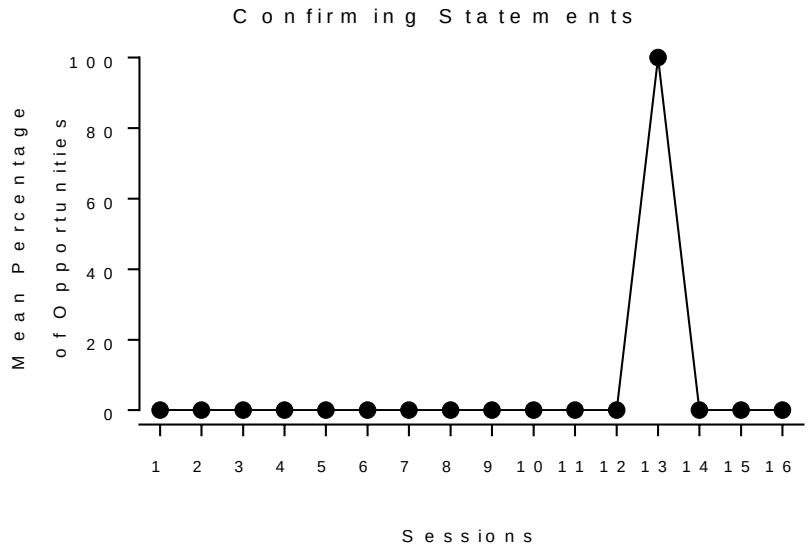


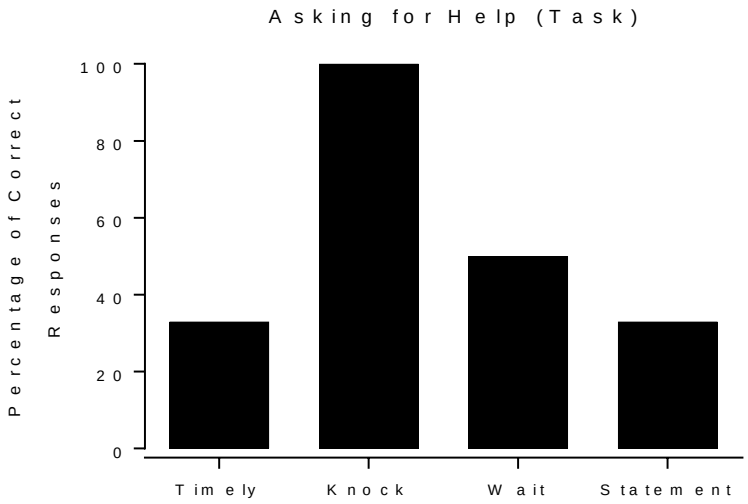
Apologize
(Corrective Task Feedback)



Assessment Results: Allison







Intervention Targets: Allison

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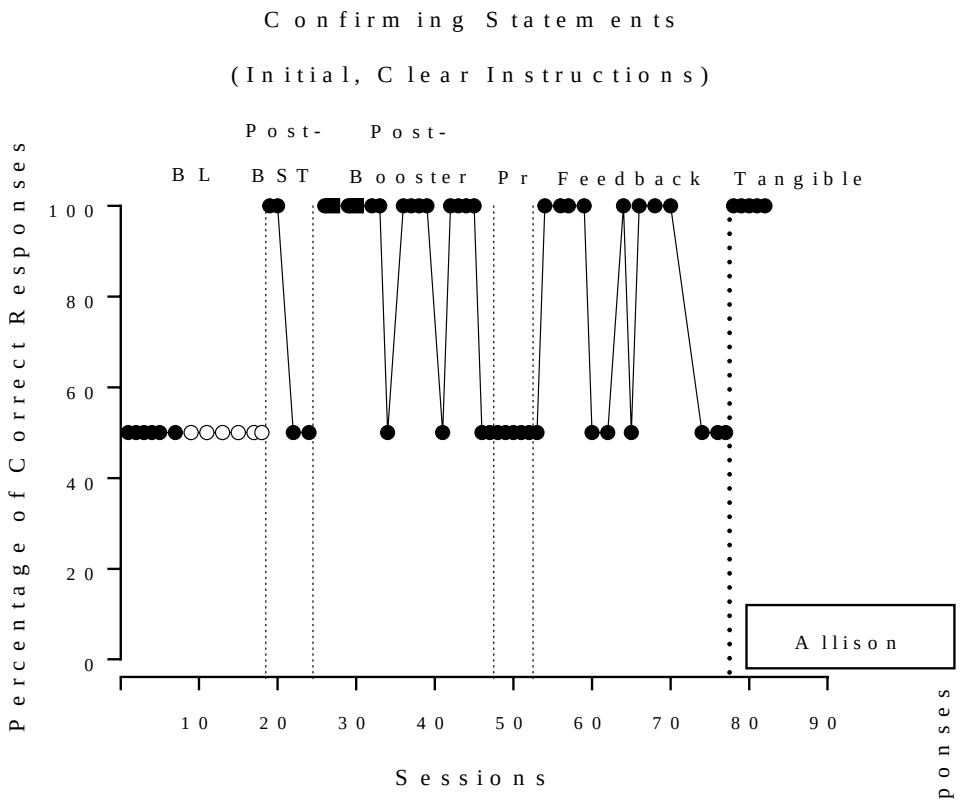
  - Corrective feedback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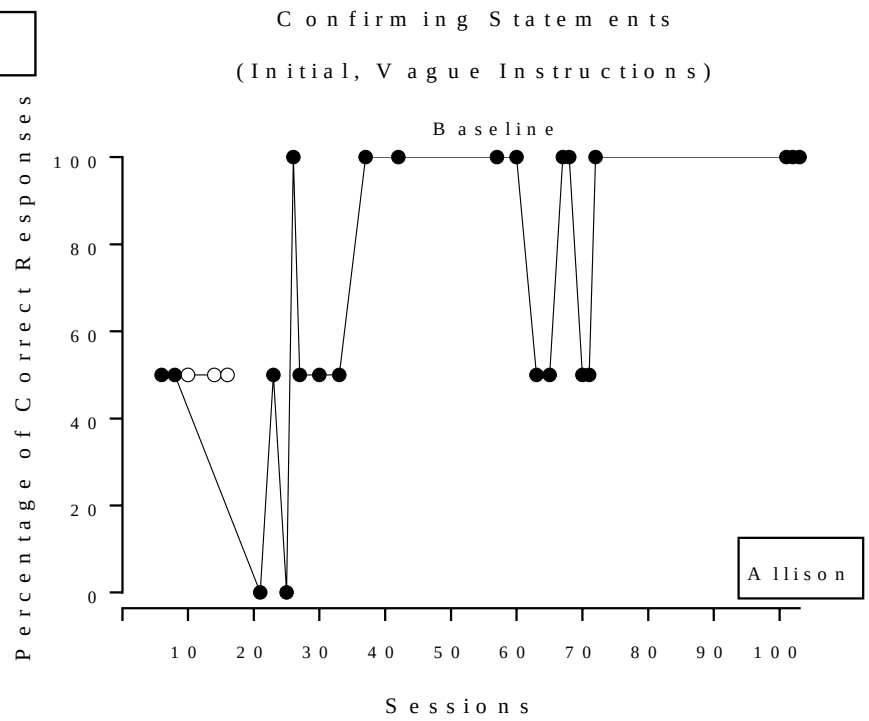
Sessions
Allison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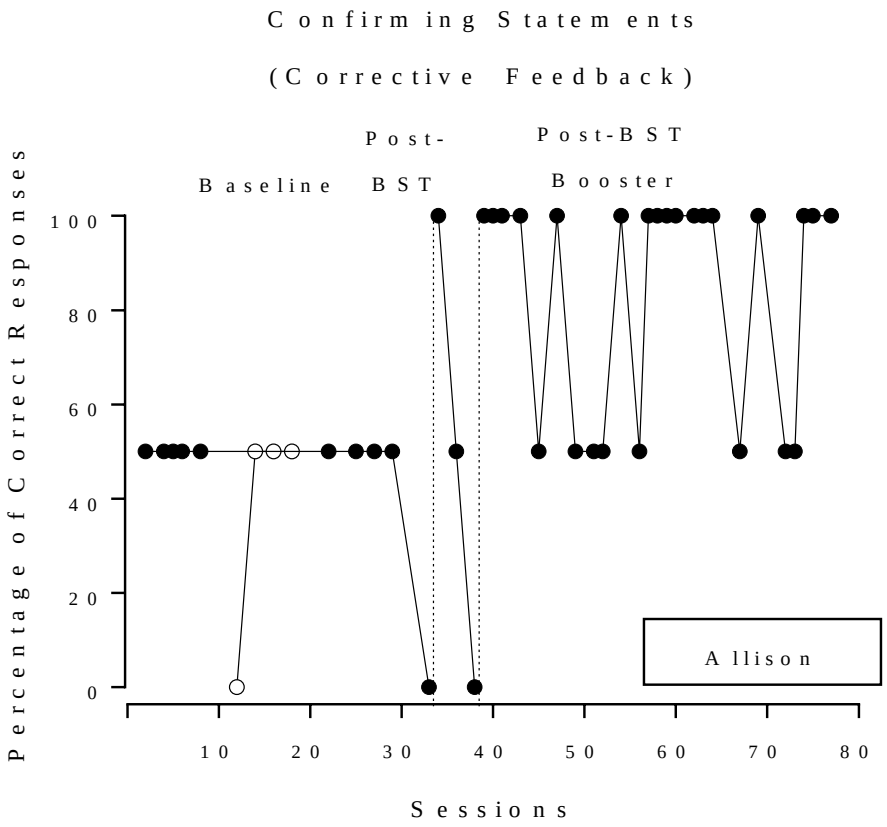
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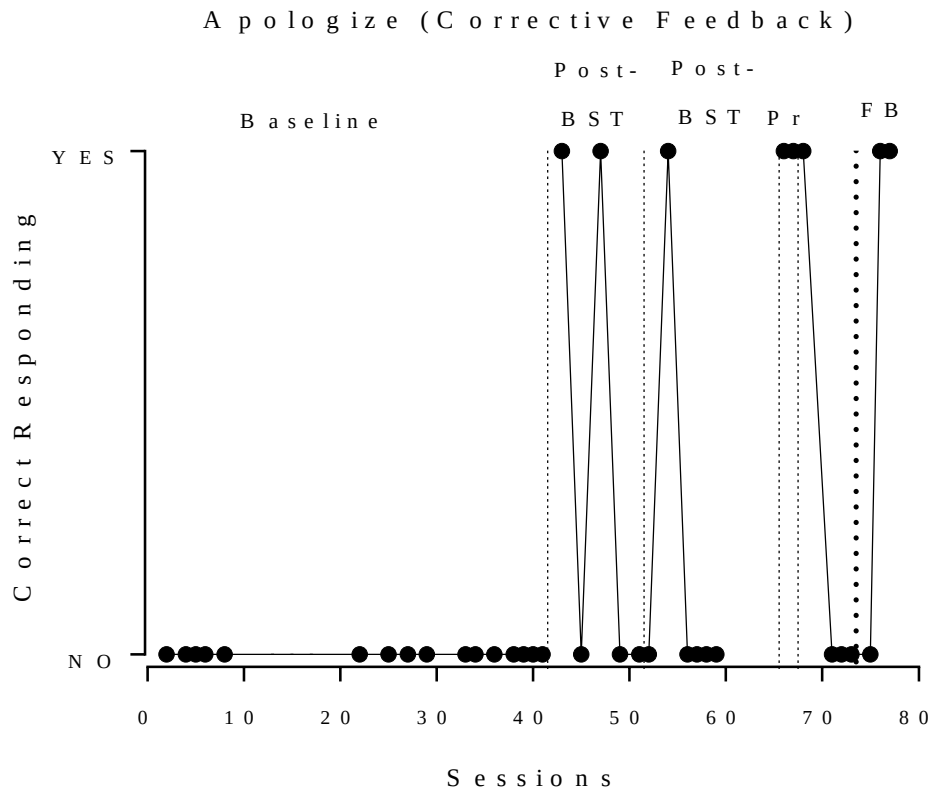
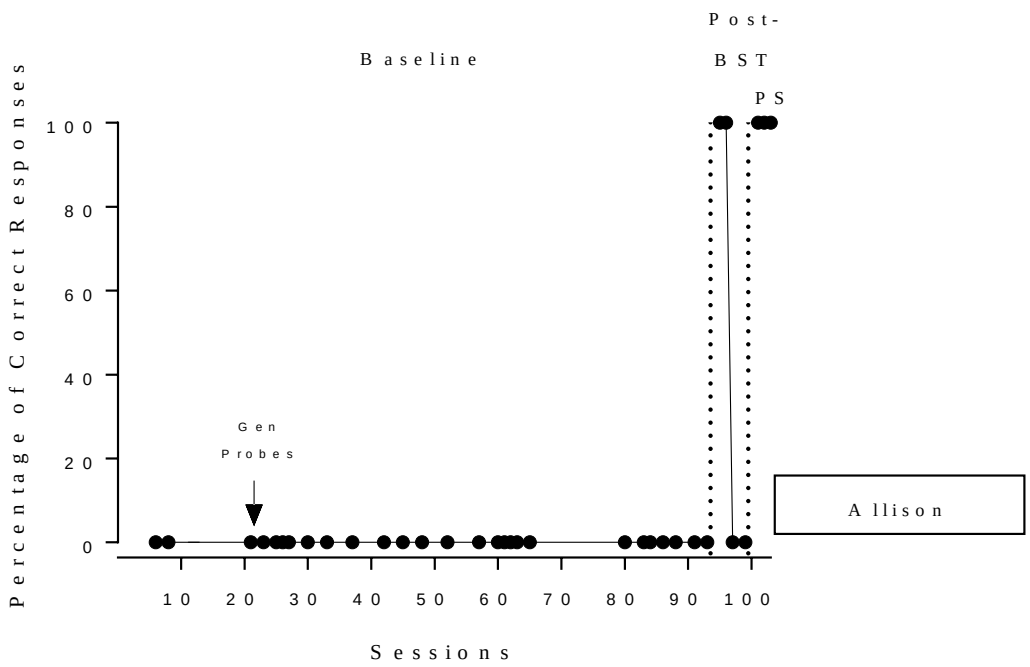
80
Sessions
Allison


Apologize (Corrective Feedback)
Baseline
Post-BST
Post-BST Pr
FB
Correct Responding
YES
NO
0
10
20
30
40
50
60
70
80
Sessions

Ask for Task Model

(Initial Vague Instructions)



Intervention: Preliminary Conclusions

- Brief BST inadequate
- Stimulus prompts may promote generalization

- Targeting multiple responses problematic?

- Social validity of responses and criterion?
  - Collecting normative data

Questions? Comments?

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