

Preparing Individuals with Autism for Life After High School (Part 2)



Dorothea C. Lerman, Ph.D., BCBA-D
lerman@uhcl.edu

Preparing and Supporting Individuals with Autism For Success in Higher Education



Special Thanks!

- Christie Stiehl
- Marisa Goodwin
- Taylor Custer
- Karlie Hinkle
- Kenya Myles
- Jennifer Darce





Issues and Problems



Young Adults with ASD

- ~35%-47% attend college^{1,2}
- ~39% complete their degree³



¹Wei, J., Yu, J. W., Shattuck, P., McCracken, M., & Blackorby, J. (2013).

²Roux, A. M., Shattuck, P. T., Rast, J. E., Rava, J. A., & Anderson, K. A. (2015).

³Newman, Wagner, & Knoky, 2011

What Difficulties in College?

- Verbal report (interviews, surveys, focus groups)¹⁻⁶

1) Academics

- Motivation
- Time-management /Organization
- Identifying important details/Seeing big picture/abstract thinking

2) Socialization

- Interacting with others/ understanding social cues/working in groups
- Managing stress and emotions
- Experiencing anxiety, peer rejection, and depression

3) Independent living



¹Elias & White, 2018; ²Gelbar et al.(2015); ³Gobbo & Shmulsky, 2014; ⁴Jansen et al. 2017, ⁵Van Hees, Moyson, & Roeyers (2014), ⁶White et al. 2016

Why Difficulties in College?

- Inadequate preparation¹
 - Least likely to participate in transition planning
 - Receive most instruction in special education classes
- Inadequate support
 - More support for academics than for socialization/independent living²
 - Limited autism-specific supports²
 - Seek few supports/accommodations³
- Poor fit⁴

Better if small, close to home, “quirky and accepting” campus culture

¹ Wehman et al. (2014)

² Gelbar et al. (2015)

³ Anderson, Carter, & Stephenson (2018)

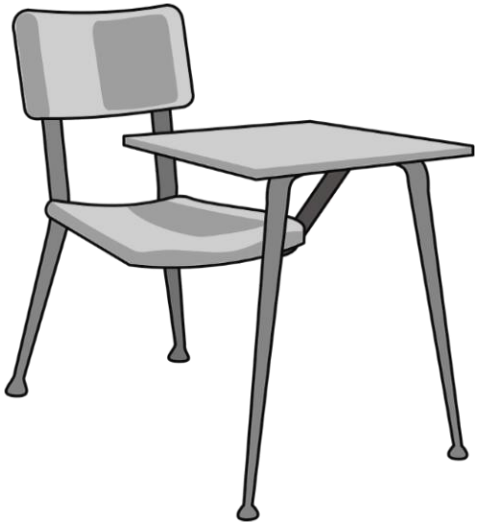
⁴ Anderson & Butt (2017)

Heading Off to College...



How is College Different?

- Classes meet less frequently
- Assignments larger, fewer
- Class sizes larger
- Faculty/peers less familiar with student
- Courses managed via email/online systems
- Less accountability
- Must request accommodations



How is College Different?

- Social demands
 - In-class activities/group projects
 - Communication with professors
 - Less structured/scheduled social events
 - Fewer organized opportunities to make new friends



How is College Different?

- Need for self-awareness and self-advocacy skills
 - Identify individual challenges and available resources
 - Register with disability services
 - Understand reasonable accommodations
 - Advocate for accommodations
 - Seek out other resources



How is College Different?

- Assume more responsibility for
 - Time and task management
 - Transportation
 - Laundry and hygiene
 - Meal planning
 - Upkeep of living space



How is College Different?

ADA/504

**Family Educational Rights
and Privacy Act (FERPA)**





How are they
being supported
in college?

How are they being supported?

Gelbar, Smith, & Reichow (2014) literature review (n = 20)

- Academic supports (reported by 60%)
 - Extra time on exams
 - Lecture notes
 - Separate testing locations
 - Extended deadlines
- Non-Academic supports (reported by 45%)
 - Peer mentorship
 - Assigned counselors/aides/liaisons
 - few - individualized interventions

Little if any research!



How are they being supported?

Barnhill (2016) - Survey of 30 university programs

- Majority large (>10,000 stds); 1%-18% of students reported ASD
- General Accommodations/Supports
 - Most Frequent: advisor, extra time (exams), testing site, tutoring
 - Rare: extra time on assignments
- ASD-Specific Accommodations/Supports
 - Most Frequent: housing, social activ., social skills grps, ind. therapy
- More accessed services when fee was charged!
- Majority provided training/workshops to faculty
- Most had parent involvement (e.g., attended initial intake)

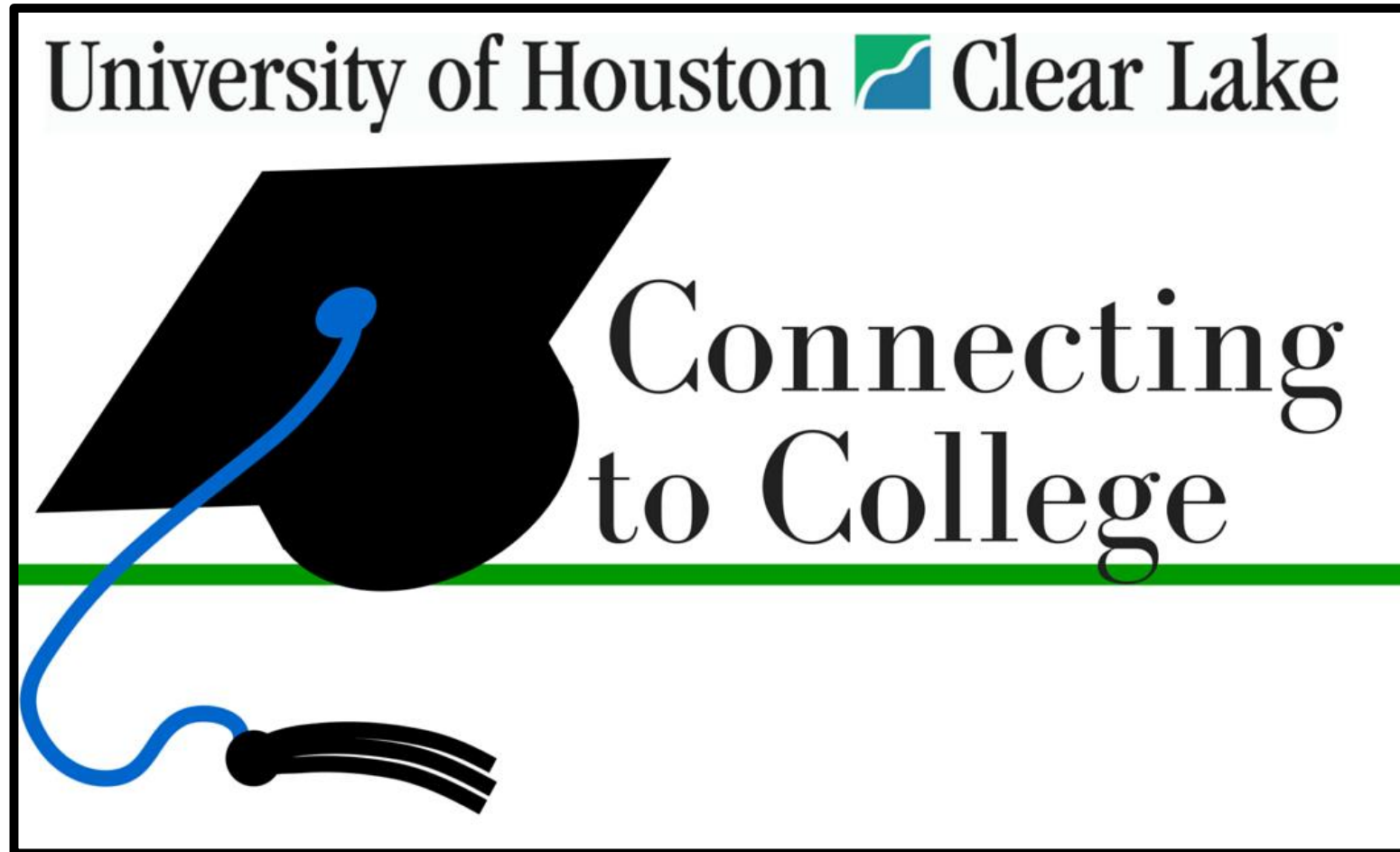
How are they being supported?

Barnhill (2016) - continued

- Few had outcome data
- BUT reported the following as important to success
 - Individualized, flexible approach
 - Parent collaboration
 - Summer transition program
 - Structured courses for social skills (versus social support groups)
- Funding an issue

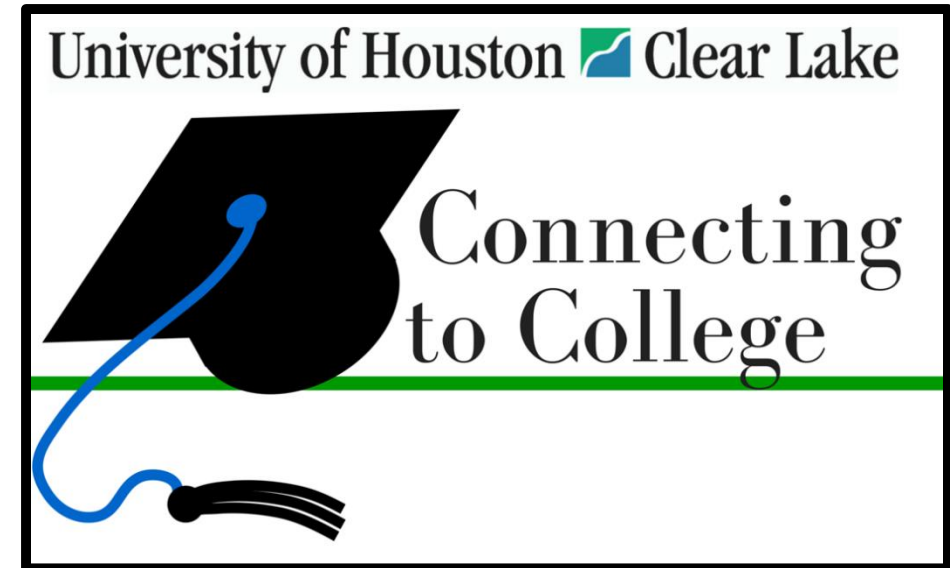
What can a small university program with minimal resources do?

An ABA-Based College Program



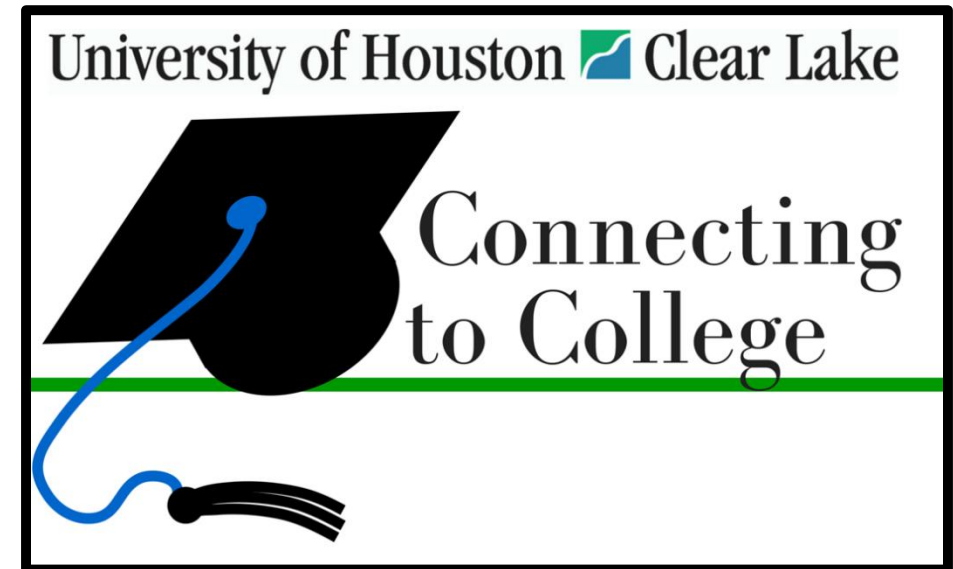
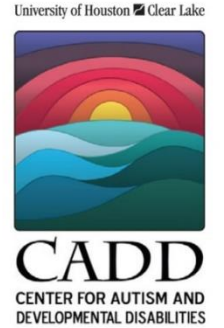
University of Houston- Clear Lake

- Small regional campus, part of UH system
- ~9,000 students
- Special item funding from state legislature
 - Supports 1 graduate std (20 hours/week)
- University provides office, phone



Connecting to College (CtC)

- UHCL Center for Autism and Developmental Disabilities
- Collaboration with:
 - Student Success Center
 - Disabilities Services
 - Career Services
 - Counseling Services
 - Dean of Students



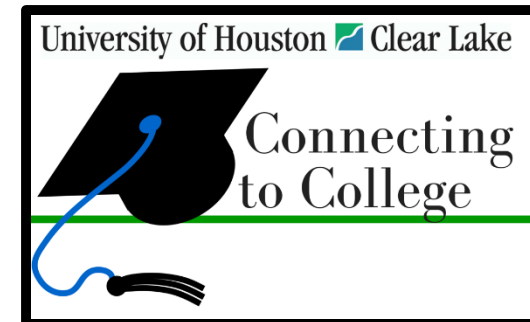
Connecting to College (CtC)

Student-wide support

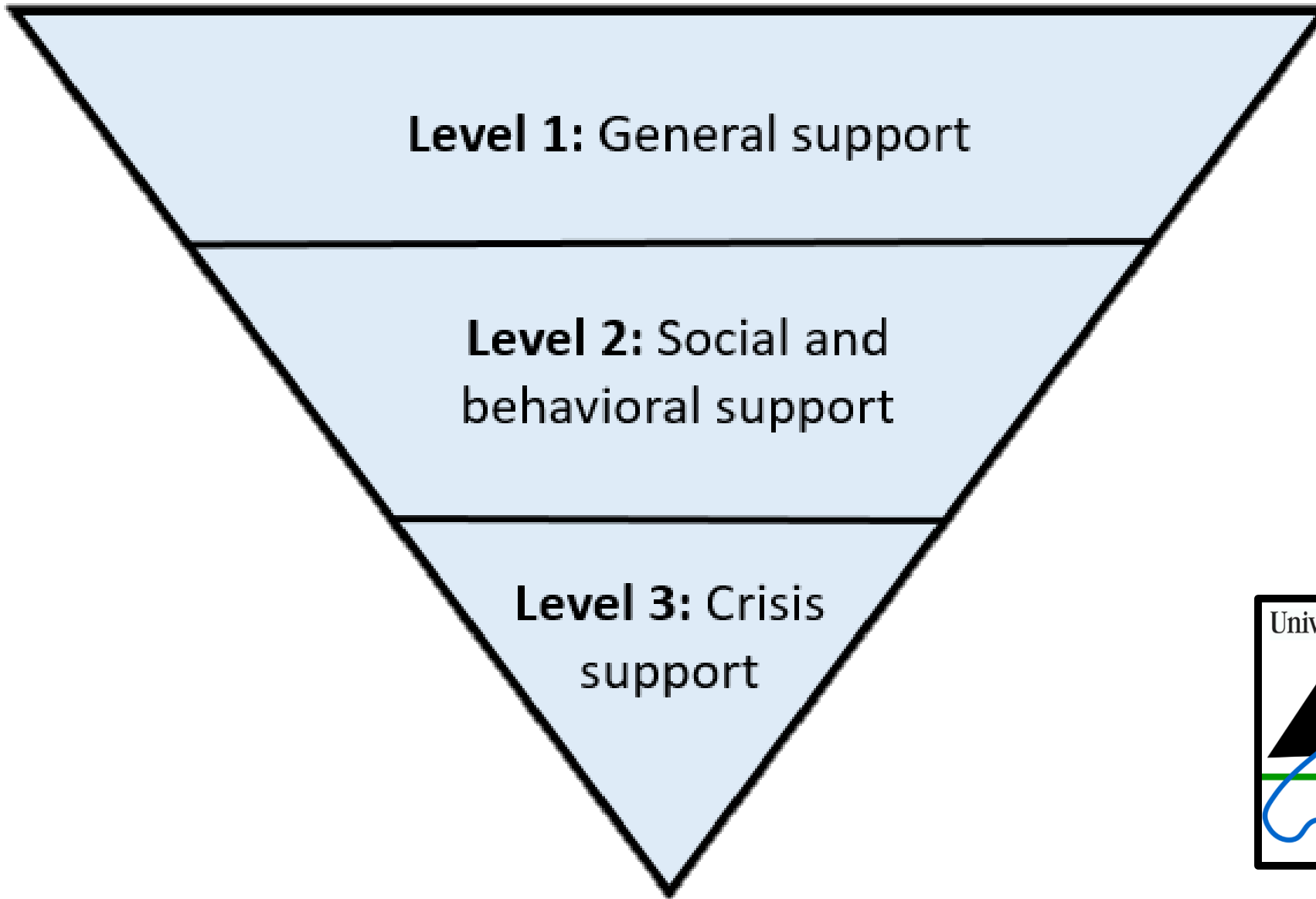
- Disability Services registration
- Counseling Services registration
- Academic coaching
- Career counseling

CtC-specific support

- Community support
- Communication with professors
- In-class support
- Weekly individualized intervention

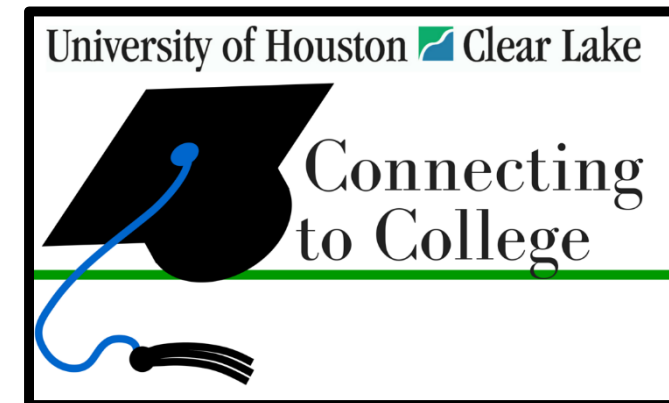


Managed Case Load



Level 1: General Support

- Disability Services (registration encouraged)
- Counseling Services
- Academic Coaching
- Career Counseling
- CtC check-in meetings
- Bi-weekly social skills group (partnership with counseling)
- Open communication across resources
 - Information disclosure consent
 - Electronic student folders on shared drive





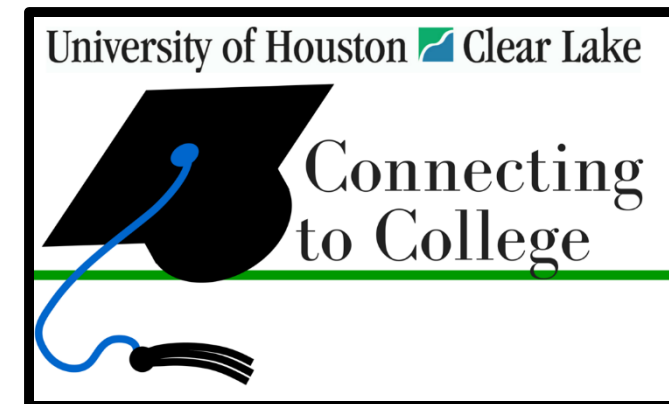
Level 1: General Support

Case Example

- Jerry (20 years)
 - Previously attended out-of-state school; dropped out during first semester
 - Goals: Succeed academically and make new friends
 - Required to attend academic coaching (met 10 times)
 - Monitored academic performance
 - Received coaching on how to initiate friendships
 - Connected with peer mentor
- Most important CtC benefits: Accountability, connection to resources

Level 2: Individualized intervention

- Same procedures as Level 1 + more intensive support
- Meet one to two times per week
- Target skills connected to student's specific goals



Level 2: Individualized Intervention

Case Example

- Jennifer (23 years)
 - Inappropriate physical contact with others (hugging professors)
 - Inappropriate social interactions with peers
- Targeted
 - Physical boundaries with others
 - Interactions with peers
 - Voice volume
- Most important CtC benefit: Said no; reported inappropriate interactions with campus employee



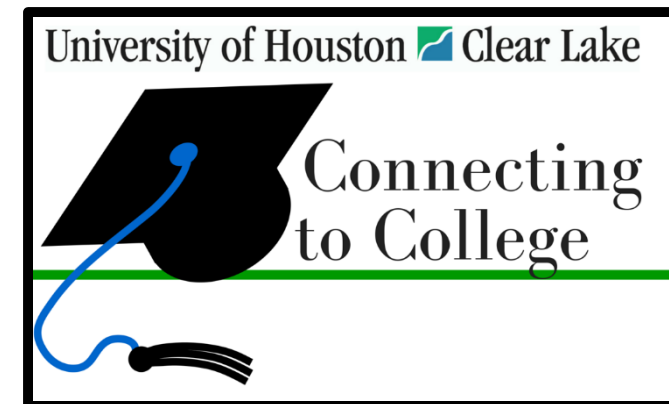
Level 2: Individualized Intervention

Case Example

- Kyle (20 years)
 - Excessive comments/questions in class
 - Interrupted others
 - Used cell phone inappropriately in class
- Targeted
 - Appropriate class participation
 - Refrain from cell phone use in class
- Most important CtC benefits: Improved interactions with professor and classmates

Level 3: Crisis support

- Short-term support
 - Students in academic, personal, or professional crises
 - Same procedures as Level 2





Level 3: Crisis Support

Case Example

- Connie (30 years)
 - Failing all classes; extremely disorganized
 - Abrasive interaction style; rigid opinions easily offended others
 - Intervention
 - Helped re-establish alienated connections to support services
 - Partnered with faculty to promote appropriate class participation and assignment completion
- Most important CtC benefits: Access to support services; additional support for faculty and staff



Level 3: Crisis Support

Case Example

- Nolan (26 years)
 - Referred by Dean of Students due to outbursts (i.e., cursing, yelling, threats) on campus; staff felt threatened
 - Expressed concern about social interactions
 - Intervention
 - Focused on identifying elevated arousal and engaging in coping strategies
 - Targeted conversation skills (avoiding offensive topics/statements, asking questions, sharing conversation)
- Most important CtC benefits: Improving interactions with peers, professors, colleagues in internship, job interviewers

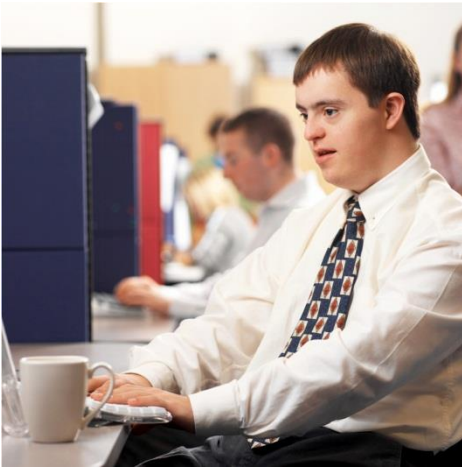
Connecting to College: Community Support

- Faculty and staff support
 - Faculty and staff consultations
 - Classroom observations
 - Facilitated discussions
- “Autism Ally” Trainings
 - University open trainings
 - Individualized department trainings
- Collaboration with UHCL support services





Start Early! What Should We Target NOW?



What Should We Teach? Examples

- Class Participation
 - Follows instructions
 - Participates appropriately based on class style
 - Completes group projects and in-class activities
- Time and Task Management Skills
 - Manages daily, weekly, and semester schedule
 - Completes homework
 - Schedules time for social activities
- Daily Living Skills
 - Wears clean clothes
 - Plans meals
 - Cleans living space



What Should We Teach? Examples



▣ Safety Skills

- Understands dating rules and consent
- States laws, student code of conduct, and consequences
- Uses effective decision-making and problem-solving skills
- Engages in safety skills when living and traveling alone

▣ Social Skills

- Engages in small talk
- Finds peers with common interests
- Develops adult friendships

▣ Job Skills

- Answers interview questions effectively
- Responds appropriately to feedback



What Should We Teach? Examples

- Self Advocacy Skills
 - States reasonable accommodations
 - Identifies available support services
 - Describes own limitations
 - Asks for help when needed



Intervention



Intervention Research



- Reviews:
 - Kuder & Accardo (2018); Anderson, Stephenson, Carter, & Carlon (2019)
6 single-subject design studies / 1 RCT (2007-2017)

DVs

- # peer interact/social activities (Ashbaugh et al, 2017; Koegel et al. 2013)
- Empathic communication (Koegel et al., 2016)
- Conversation skills (Mason et al., 2012, 2019)
- Vocational interactions and task engagement (Gilson & Carter, 2016)
- Quality of writing (Jackson et al., 2017)

Intervention Research

- Interventions

- Video modeling (Mason et al., 2012)
- Stimulus prompts + video feedback (Koegel 2016)
- Remote audio coaching (Gilson & Carter, 2016; Mason et al., 2019)
- BST + “structured social planning” + peer mentors (Ashbaugh et al., 2017)
- BST + stimulus prompts (Jackson et al., 2017)

- Some Gaps

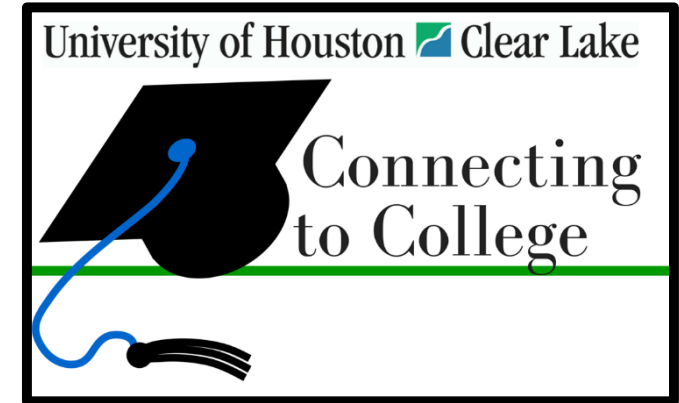
Limited assessment of generalization

Short-term evaluations

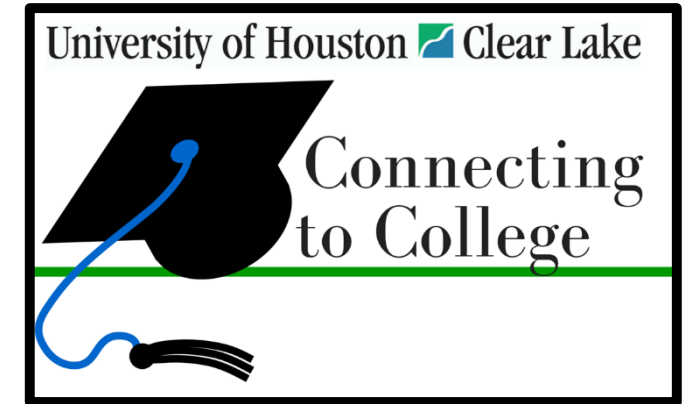
Social validity of the targets, procedures, and outcomes?

Connecting to College: Intervention Approach

- Individualized intervention
 - 1 to 3 goals per student
 - Target observable and measurable behavior
 - Intervention 1 to 3 hours/week
 - Sessions in office or classroom
 - Program for generalization
 - Assess under “blind” conditions when possible



Connecting to College: Program Examples



Herman: Accessing academic supports

Charles: Improving conversation skills

Kyle: Reducing excessive comments/questions in class

Assessment: Behavior and Goal

Herman: Accessing academic supports

- Identify a relevant academic resource when faced with a problem or difficulty across 4 of 5 novel situations

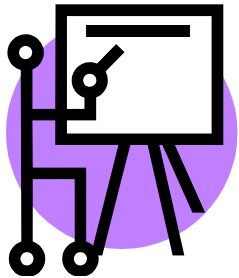
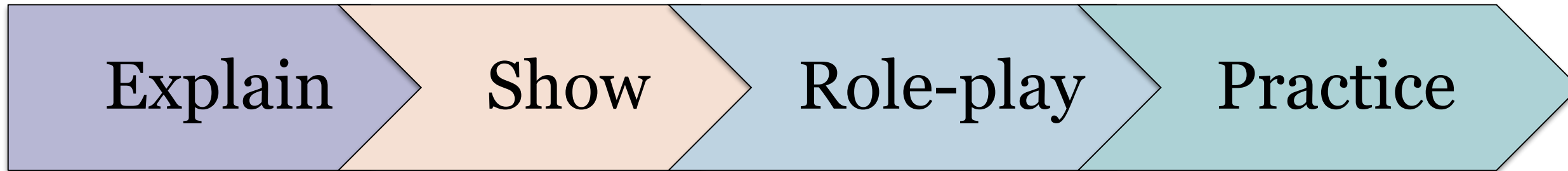
Charles: Initiating, maintaining, and ending group conversations

- Follow at least 90% of steps for starting, maintaining, ending a conversation

Kyle: Reducing excessive comments/questions in class

- No more than two comments/questions without the professor asking for class input across 2 1-hour class observations

Intervention (Herman/Charles): Behavior Skills Training



Intervention: Behavior Skills Training

Herman

Explain



Connecting to College

Finding Campus Resources

1. Online options
 - a. Look through UHCL website
 - b. Search online (search engine "UHCL" + INSERT NEED)
 - c. Read university emails
2. Phone options
 - a. Student Assistance Center

Intervention: Behavior Skills Training

Charles

Explain

Starting a conversation

Step	Description
1	Casually look over
2	Use a prop
3	Find a common interest
4	Move closer to the person
5	Mention the common interest
6	Trade information
7	Assess interest: (1) Are they talking to me? (2) Are they looking at me? (3) Are they facing me?
8	Introduce yourself

Ending a conversation

Step	Description
1	Keep your cool
2	Look away
3	Wait for a <u>brief</u> pause
4	Give <u>brief</u> cover story for leaving
5	Walk away

Intervention: Behavior Skills Training

Herman

Show



Intervention: Behavior Skills Training

Charles

Is that the
new iPhone?

Show

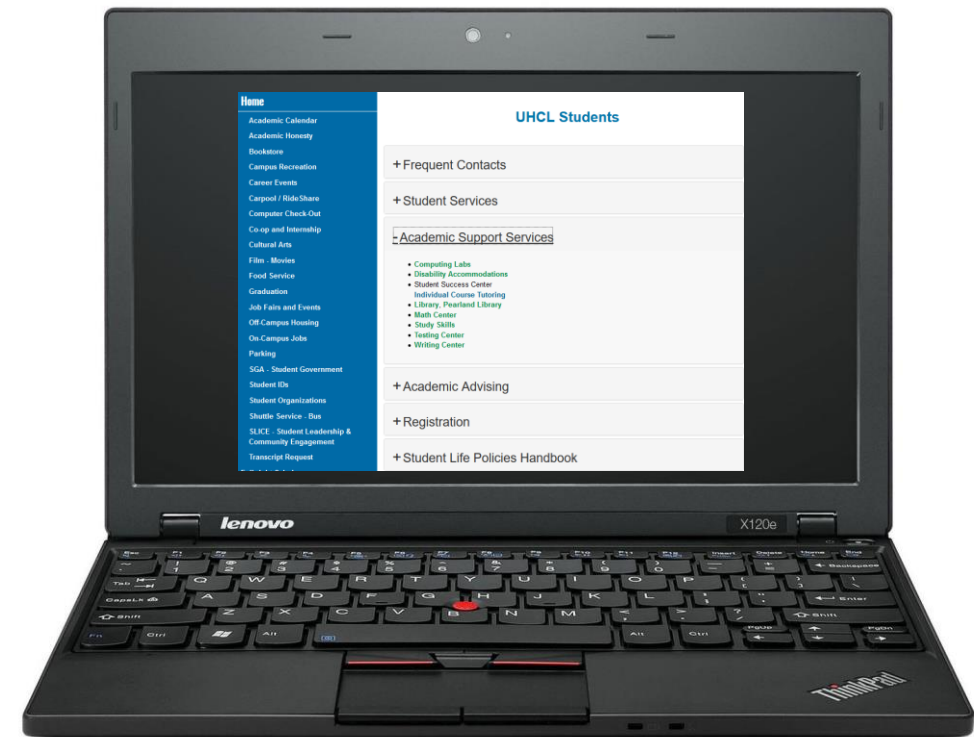


Intervention: Behavior Skills Training

Herman

Role-play

Practice



Intervention: Behavior Skills Training

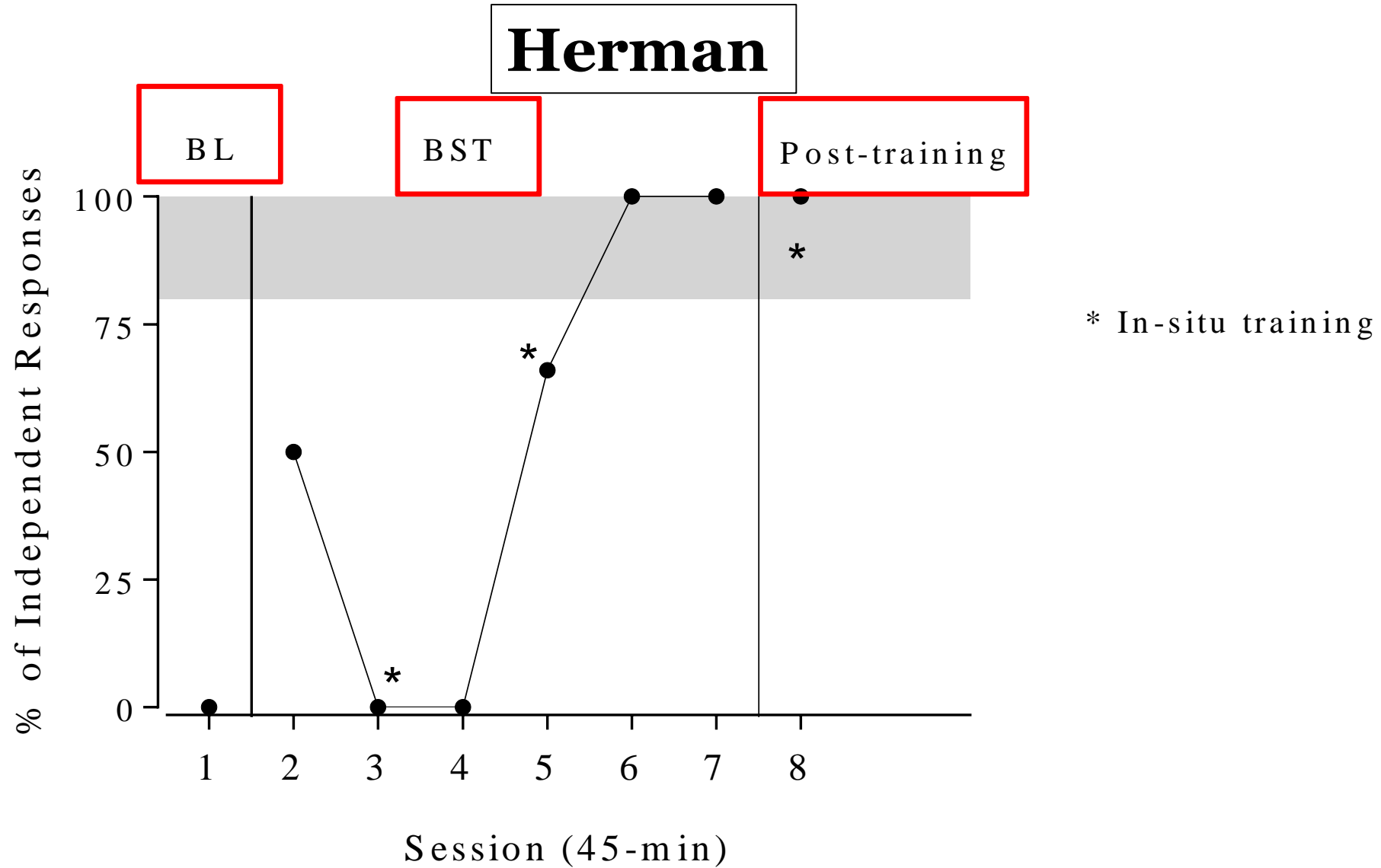
Charles

Role-play

Practice

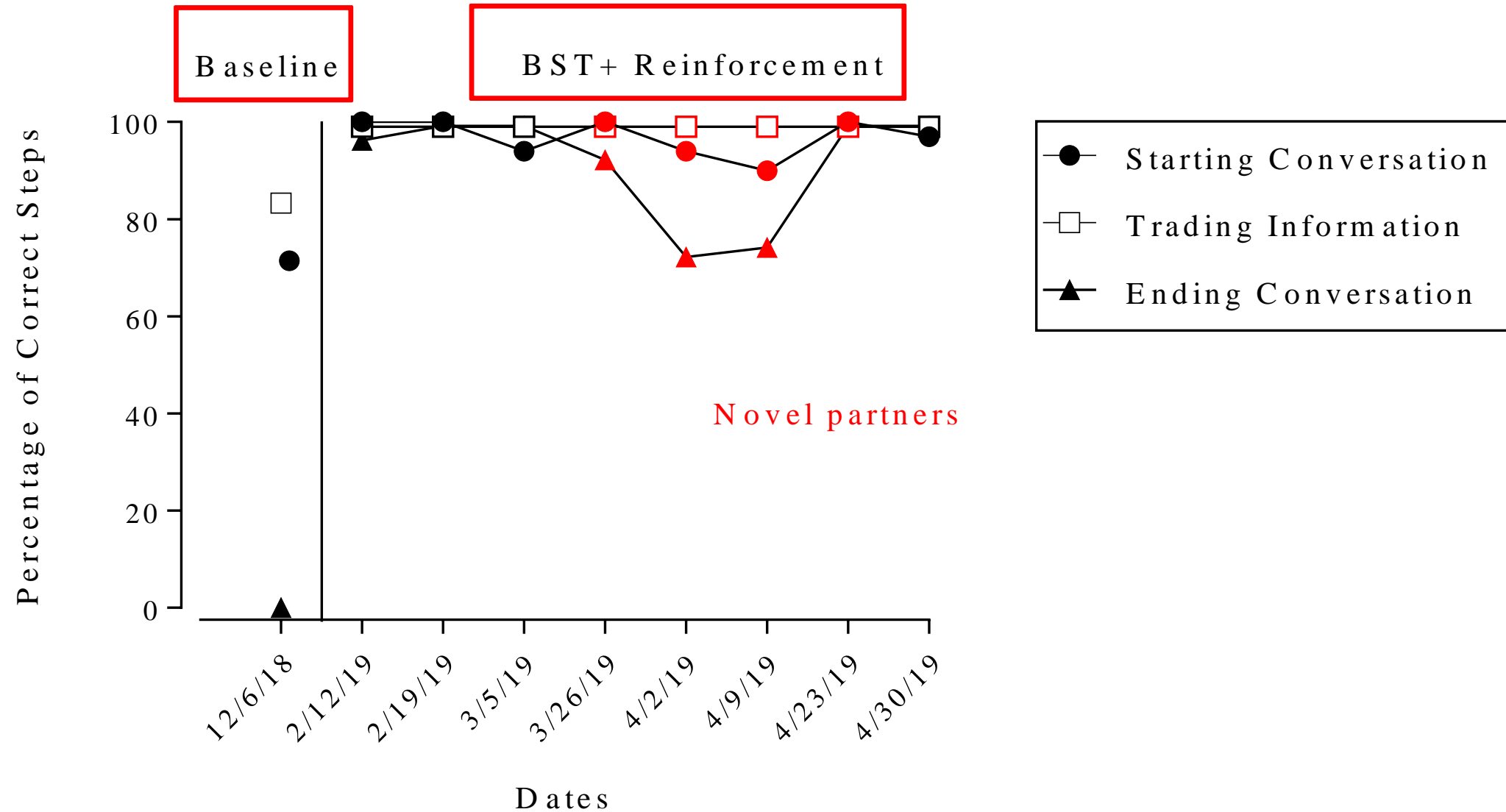


Identifying Academic Resources



Charles

Group Conversation Skills



Intervention (Kyle)

- Clear rules
- Prompts
- Increased opportunities

Date: _____

Class: _____

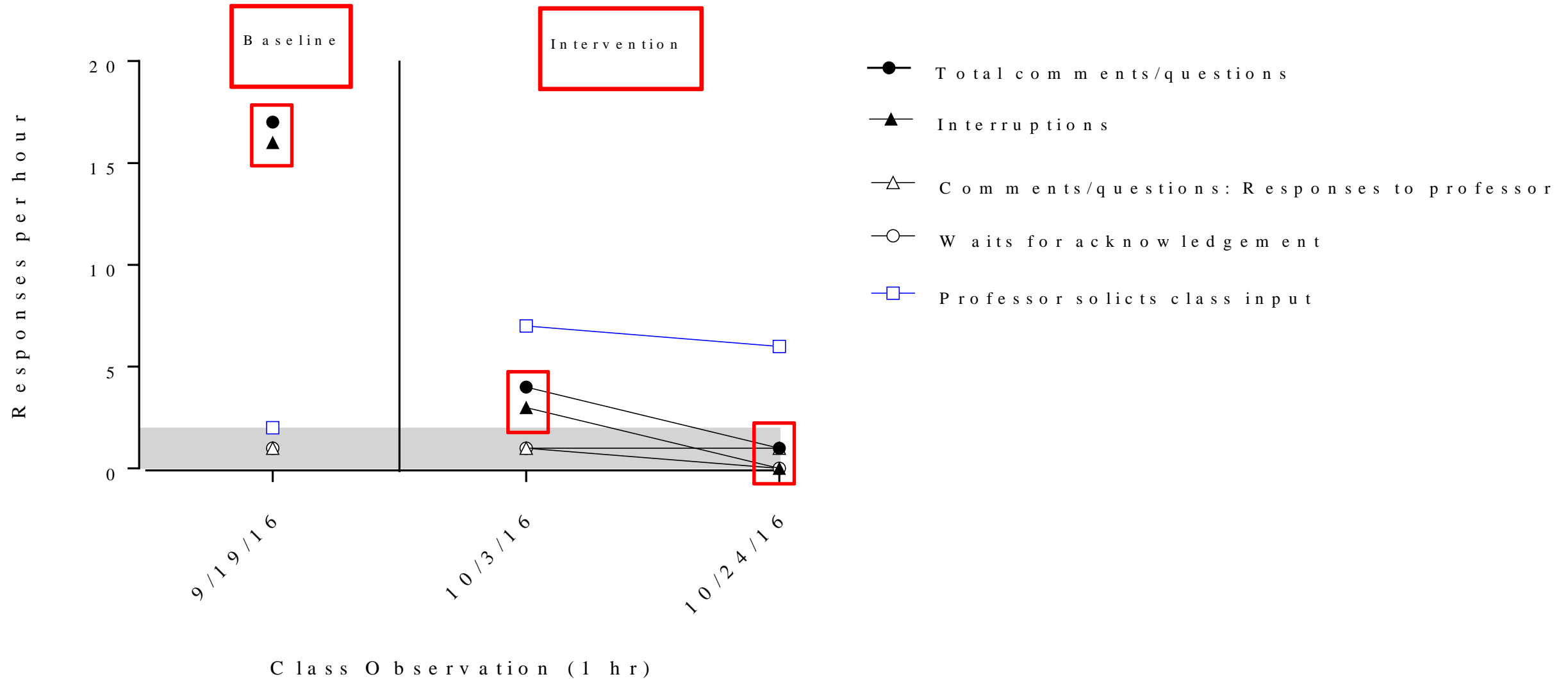
- Only talk when the professor asks if anyone has questions or comments
- If you want to participate at other times, write down something that will help you remember what you wanted to say...

1. _____

2. _____

3. _____

Reducing Excessive Class Participation

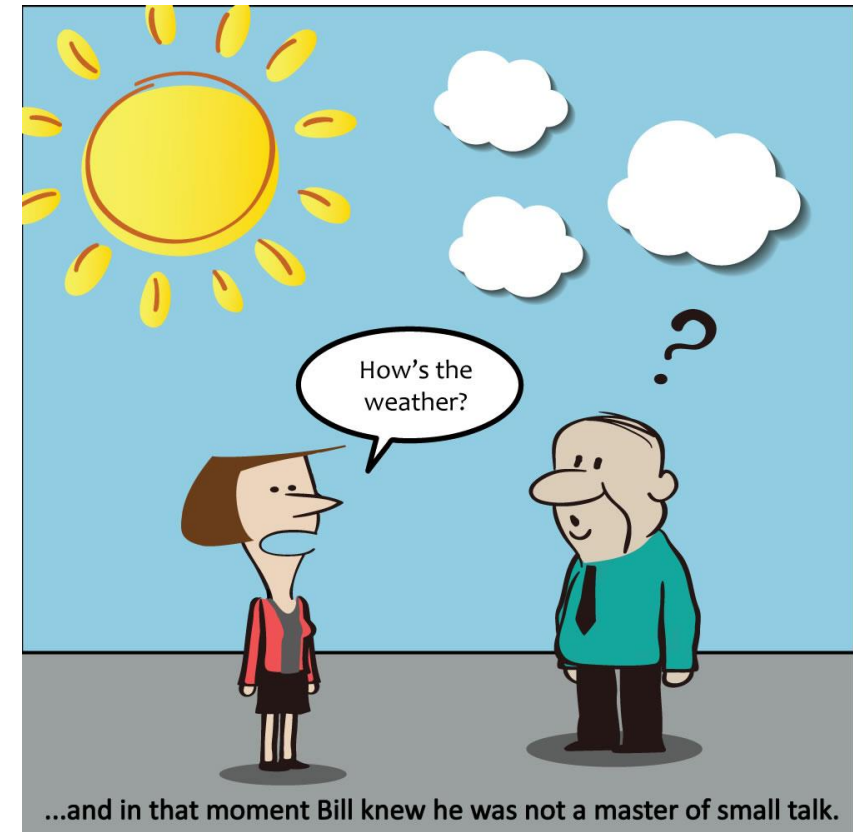


Improving Conversation Skills of Adults with Autism via Group Instruction



Purpose

- Benefits of small-talk conversation skills
- Benefits of individualized intervention
- Evaluate group model feasible for clinicians
- Individualized intervention via
 - Computer-based behavioral skills training
 - Peer practice
- Assess social validity of outcomes



Experiment I

Participants

- Four males and one female with ASD (17-33 years old)
 - Displayed three conversation skill deficits
 - Interested in improving conversation skills
- Four typically-developing (TD) peers for generalization

Setting

- University classroom
- Table, chairs, pens, paperclips, books

General Method

8 sessions (4 weeks)



Intake
meeting

Baseline

Training
on skill 1

Training
on skill 2

Training
on skill 3

Follow-
up

Responses

Conversation skills assessment (Hood, Luczynski, & Mitteer, 2017)

Bruce

- Ask Questions
- Positive Feedback
- Gestures



Steve

- Distracting nonvocal
- Positive Feedback



Peter

- Physical proximity
- Perseverative topics
- Distracting nonvocal



Diana

- Gestures
- Orienting



Tony

- Length of utterances
- Distracting nonvocal
- Positive feedback



Baseline

- 5-min conversations
 - Three ASD practice peers
 - Two ASD generalization peers
 - Three TD generalization peers
- No intervention



Behavioral Skills Training

Computer based
training

Identify / define skill

Model skill

Practice
with
feedback

Test
trial

Grant

Taylor

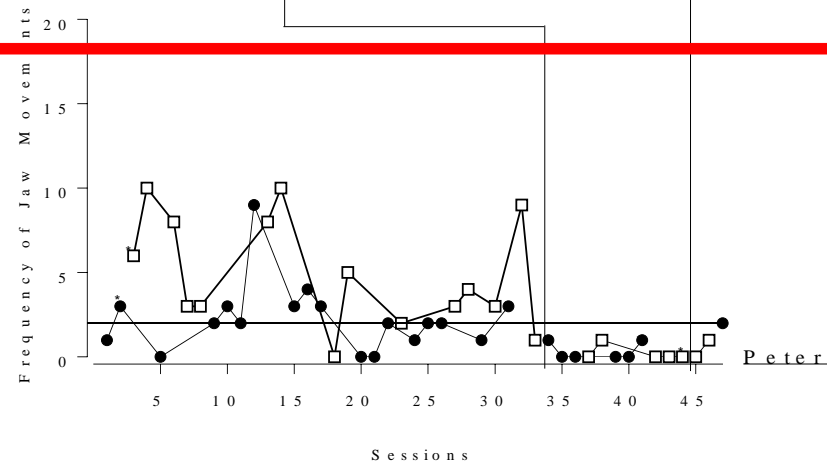
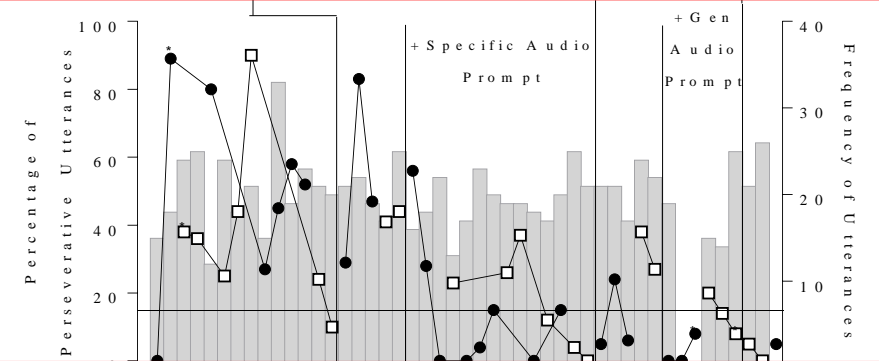
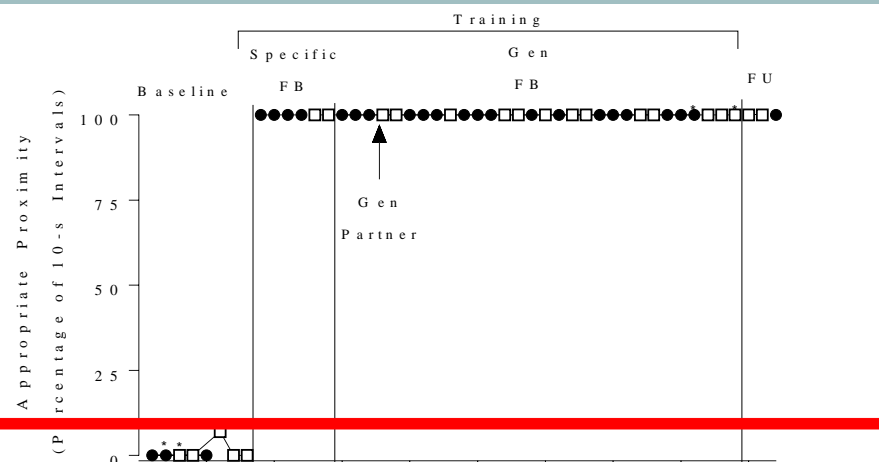
Click on the
video to watch



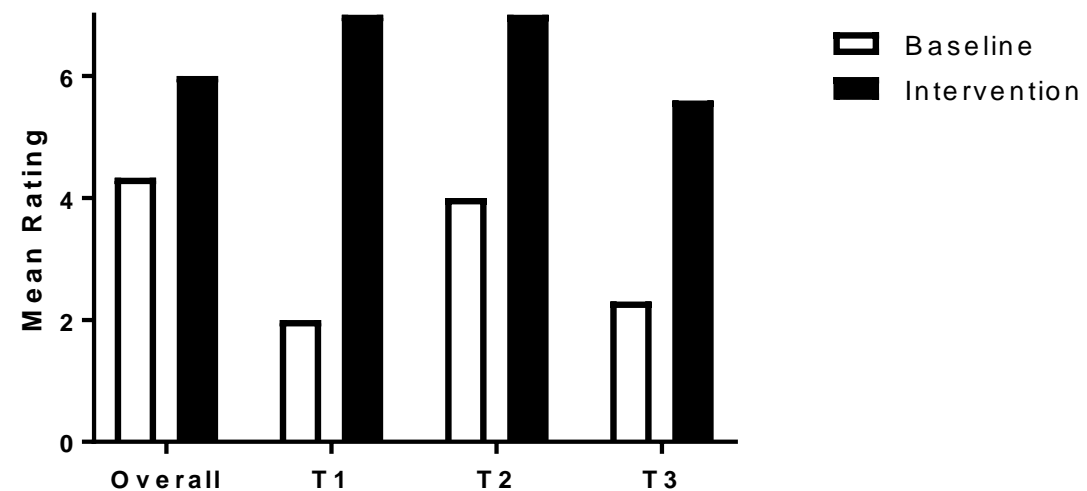
Six-Week Follow Up

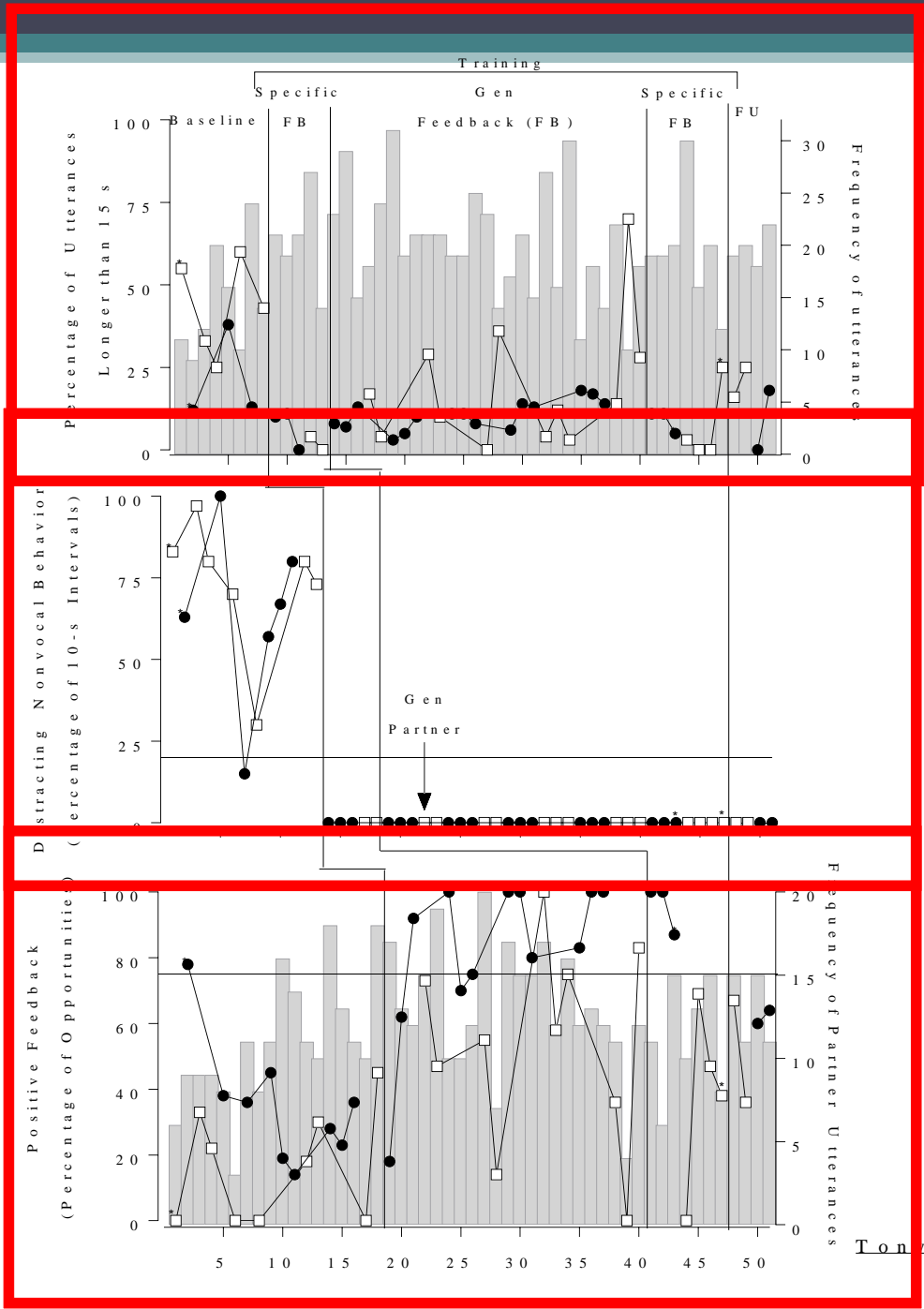
- Return to baseline
- 5-min conversation
 - One ASD practice peer
 - One ASD generalization peer
 - One TD generalization peer



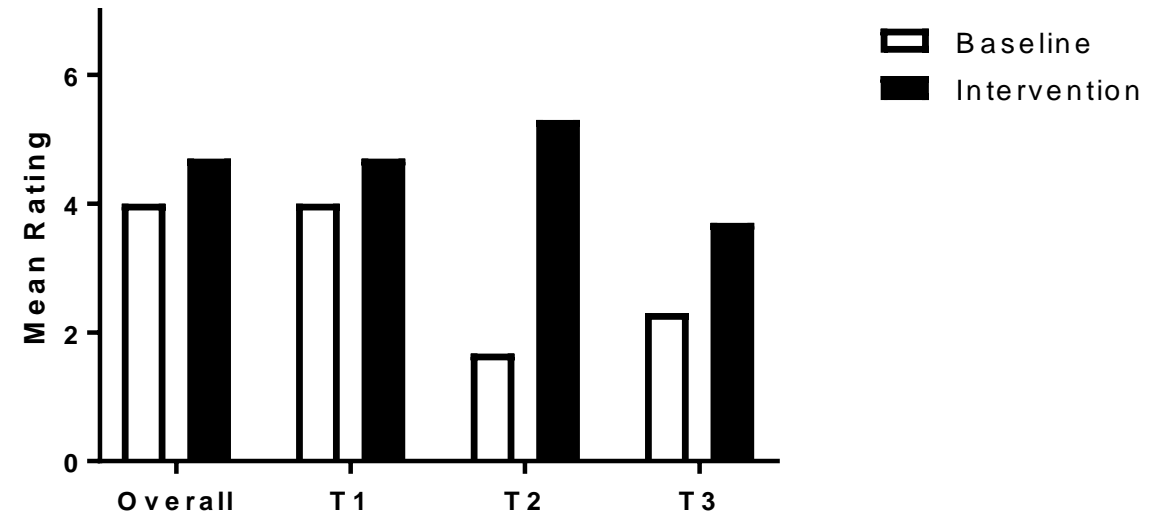


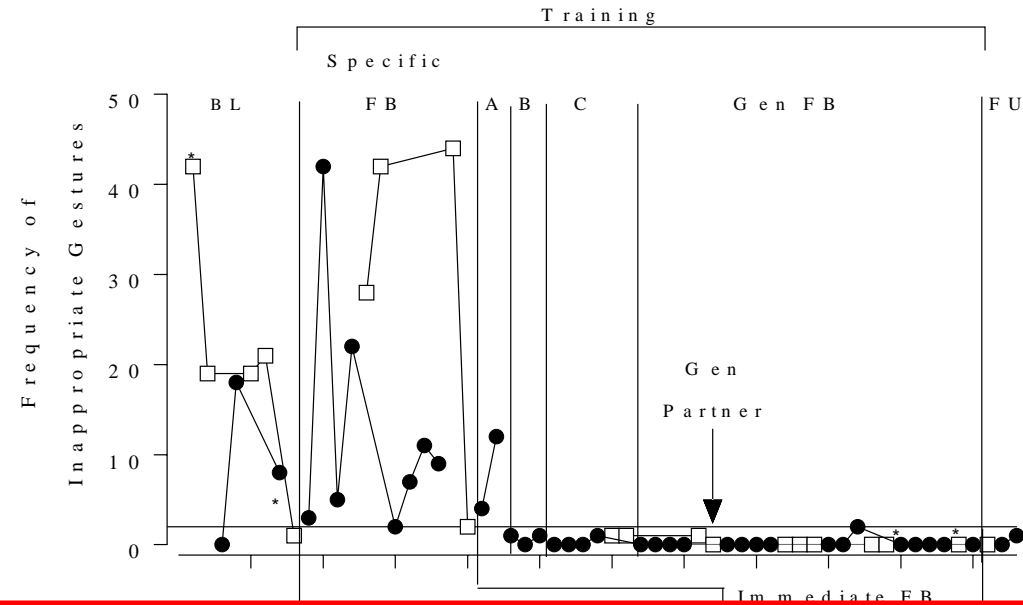
* = peer rating



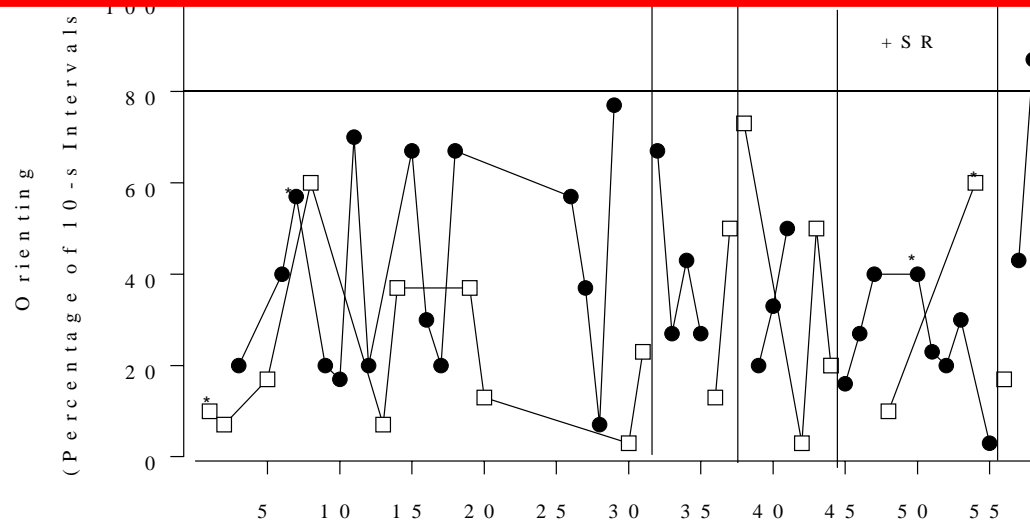
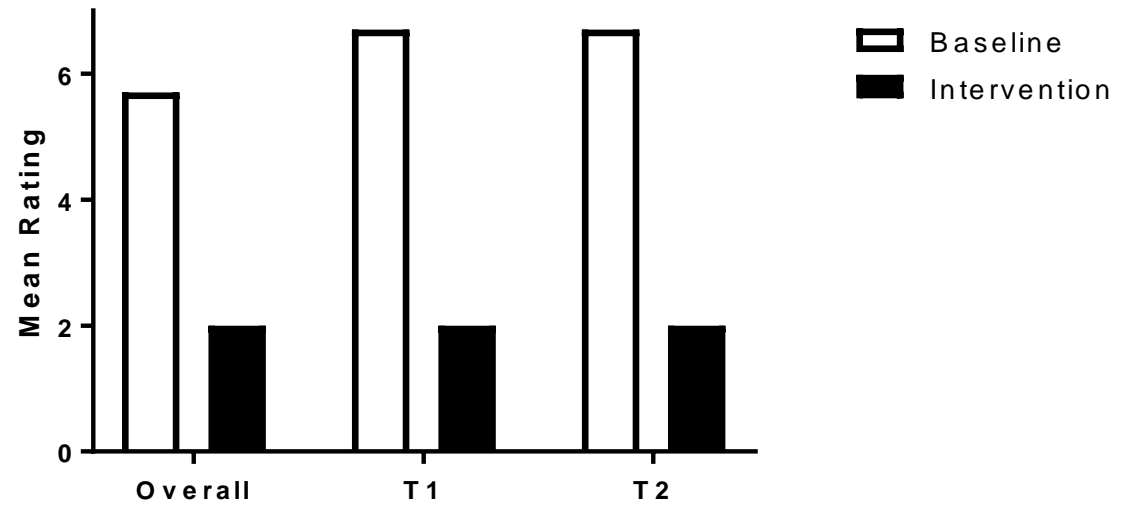


* = peer rating





* = peer rating



Liana

Results

Participant	BST alone	BST +	Not acquired	Generalized	Maintained
Bruce	X X X			X X X	X X
Peter	X X	X		X X	X X X
Tony	X X X			X	X X
Steve	X X		X	X X	X X
Diana		X	X	X	X

Discussion

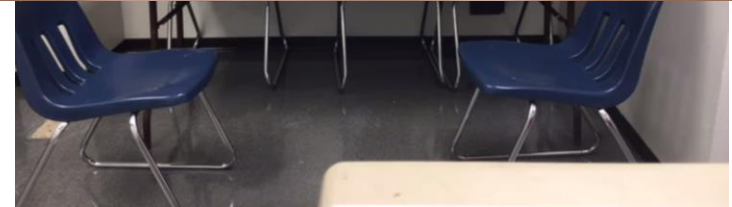
- Computer-based instruction combined with individualized practice + feedback promising approach
- Feasible model for two clinicians
- Participants reported high levels of satisfaction
- Peer ratings consistent with observed changes

Discussion

- Limited assessment of generalization
 - Multiple partners/same setting
 - Experimenter present
- Next step:
 - Multiple partners/ different settings
 - Generalization in more naturalistic settings
 - Experimenter absent

Experiment 2

- Five adults with ASD (18-32 years)
- Training setting
 - Classrooms
- Generalization settings
 - Study room, lunch table, lounge area
- Target Behaviors
 - Distracting Nonvocal Behavior
 - Interruptions
 - Duration of Utterances



Technology



Method: Behavior Skills Training

- Computer-Based Training (CBT)
- Practice
 - 5-min conversations with other adults with ASD
- Feedback
- Stimulus Prompts (if needed)

Conversing Without Distracting Habits

Created by: Taylor Custer and Christie [Stiehl](#)

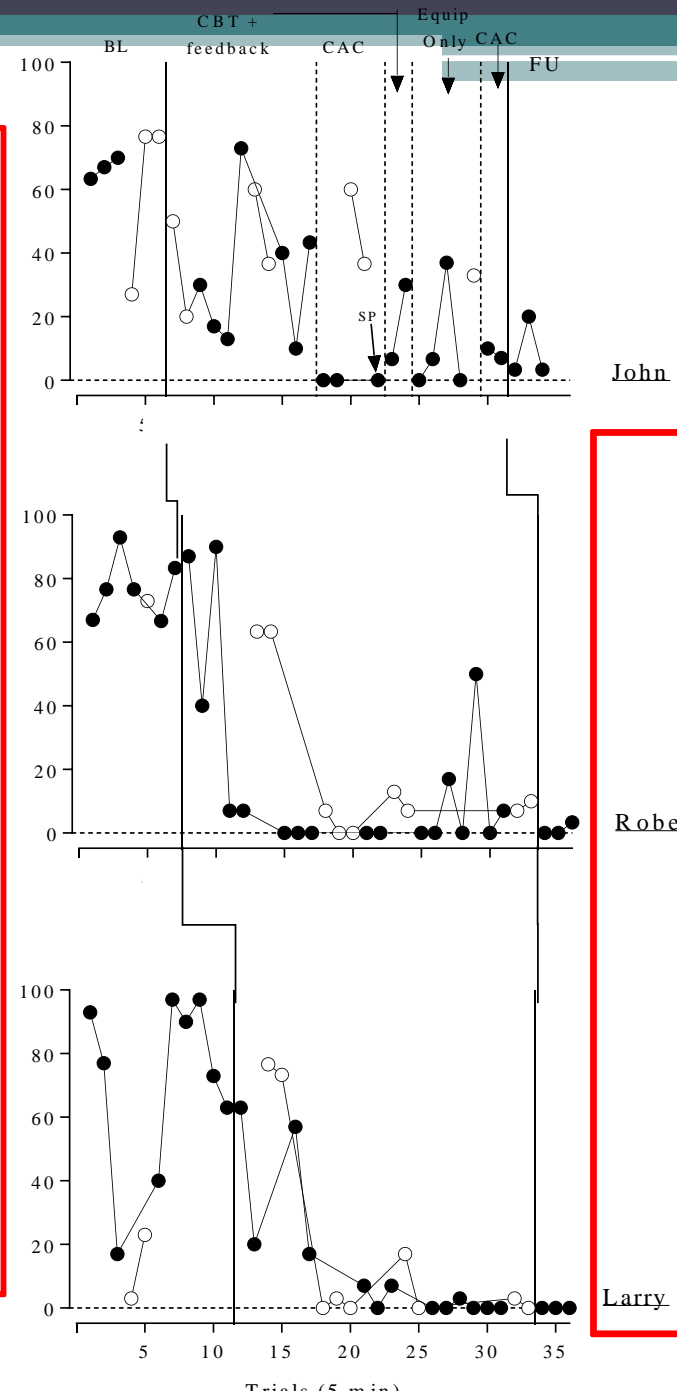


Covert Audio Coaching (CAC)

- Participant cellphone + ear bud
 - Discrete live coaching
 - Immediate, specific feedback
 - Contingent on each instance of behavior
 - Describe behavior and prompt replacement behavior
 - Instruct participant to use stimulus prompt



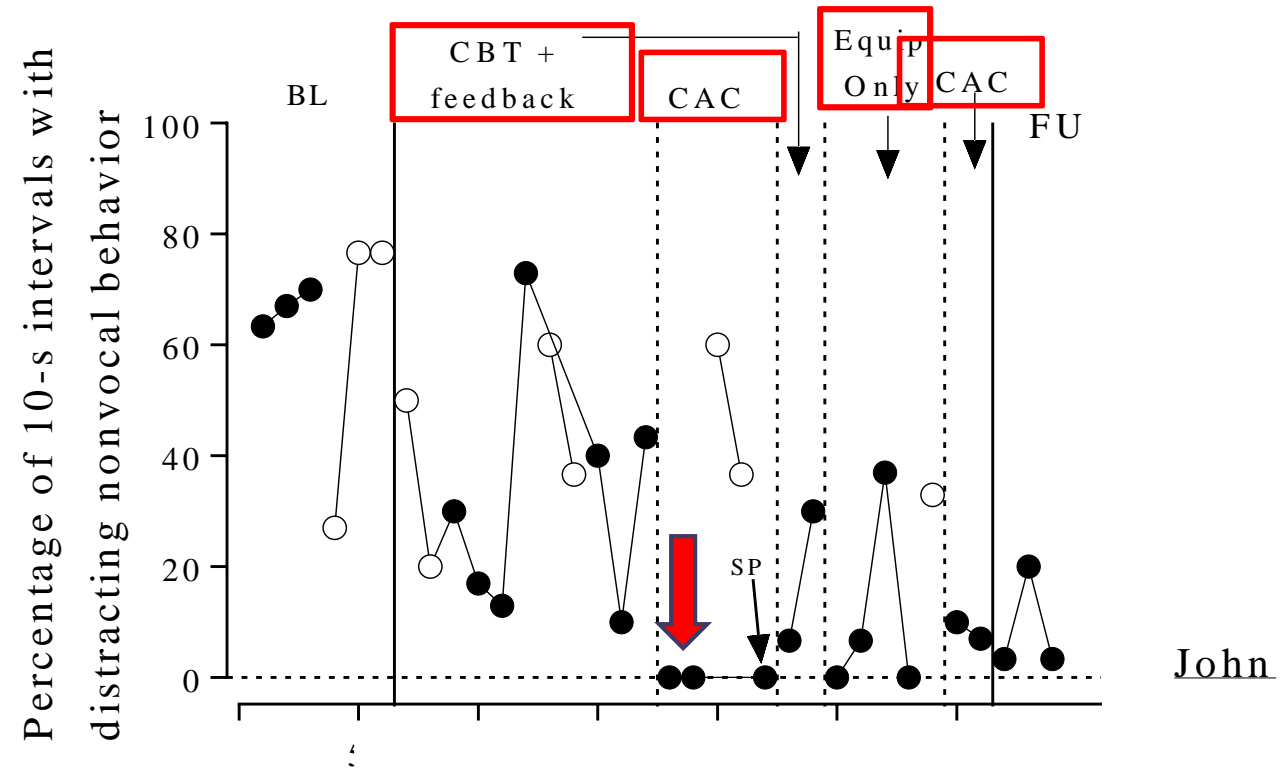
Percentage of 10-s intervals with distracting nonvocal behavior

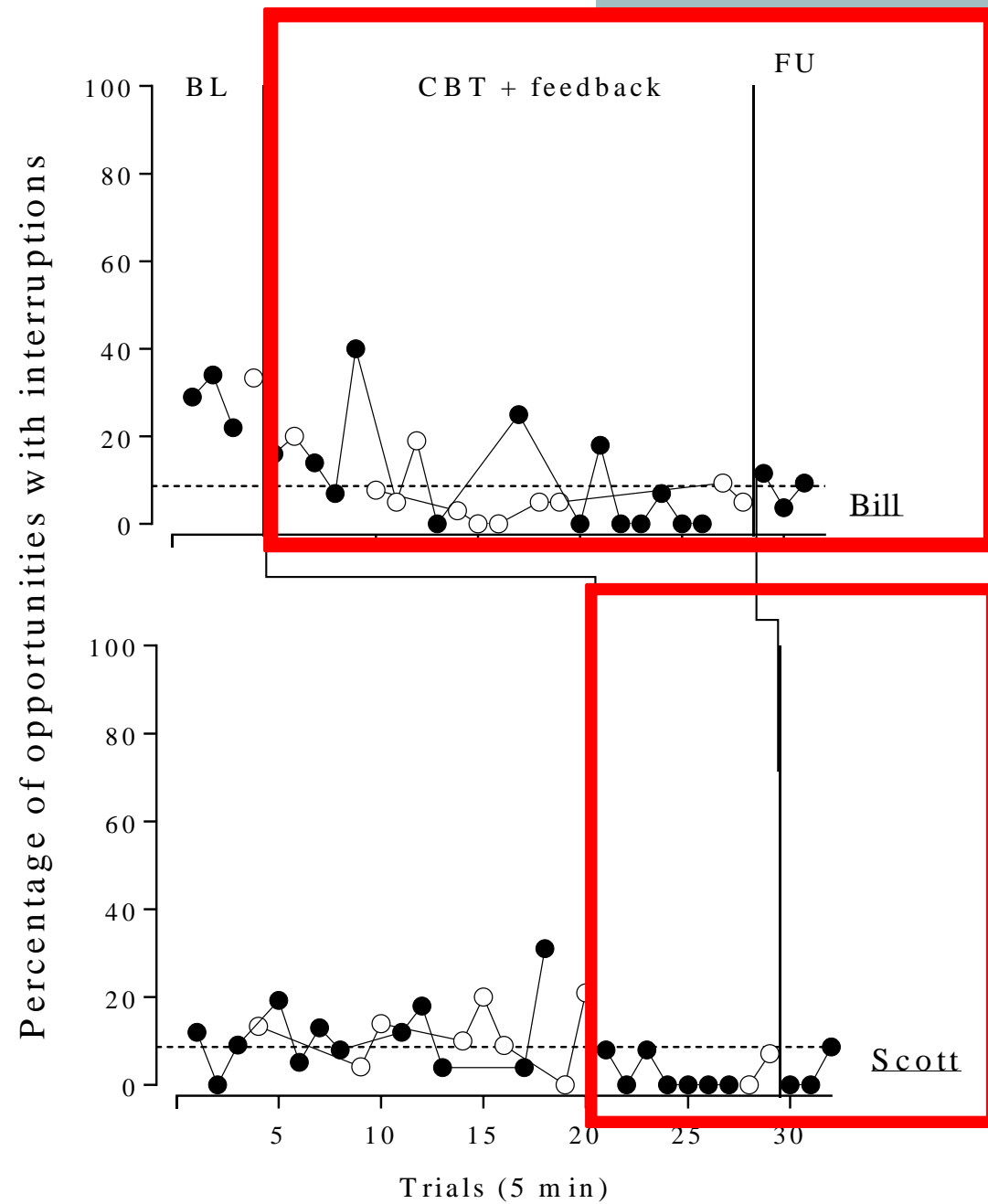


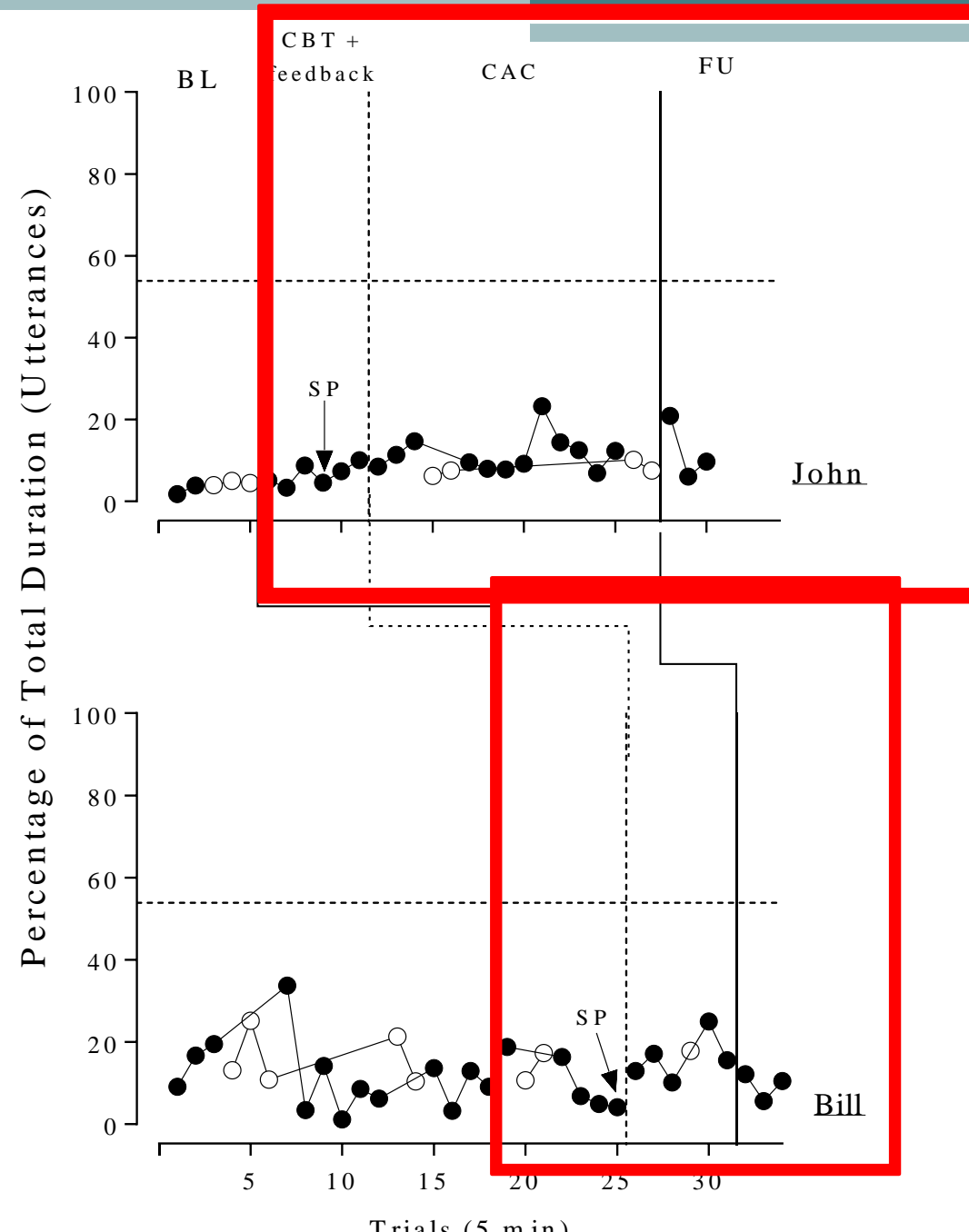
John

Robert

Larry

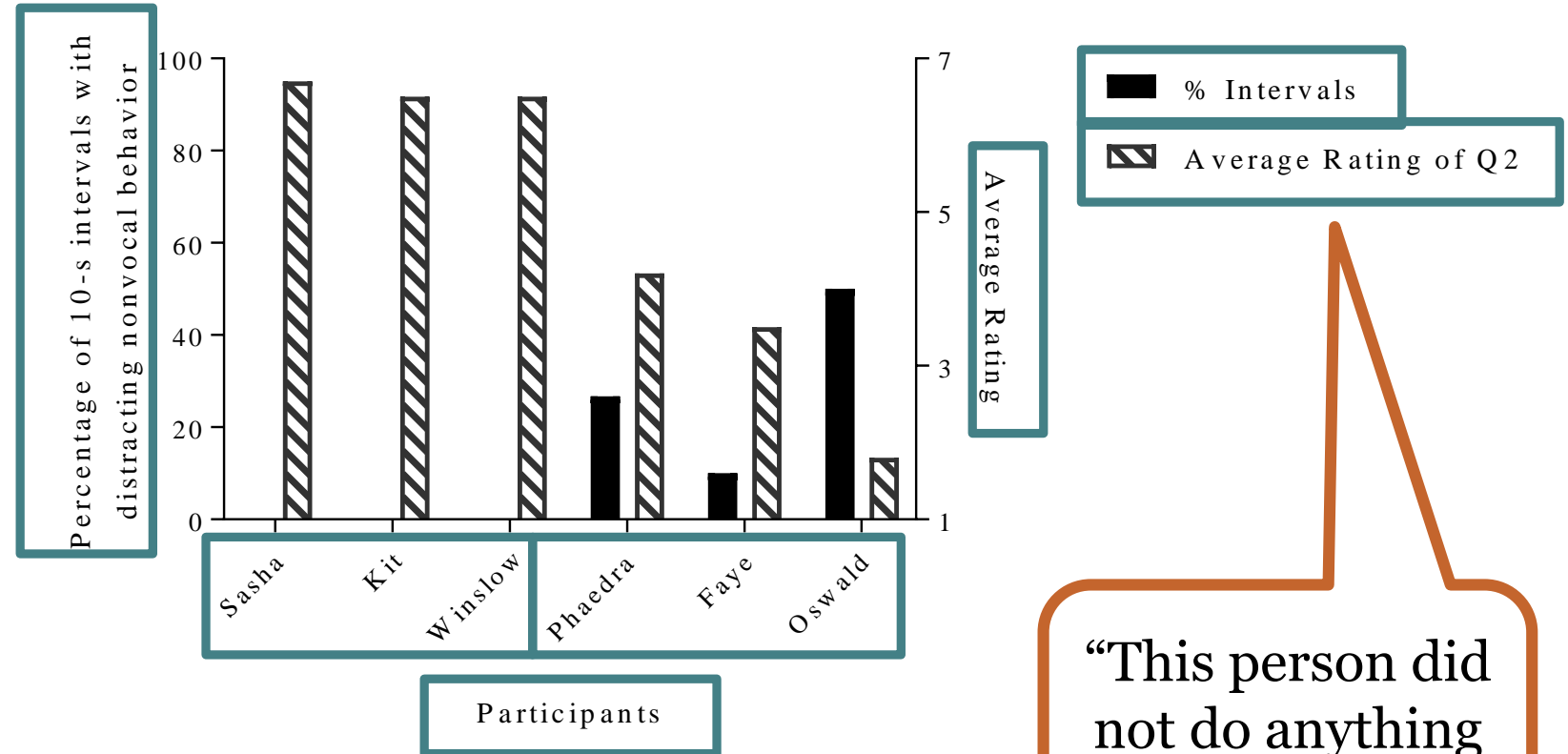
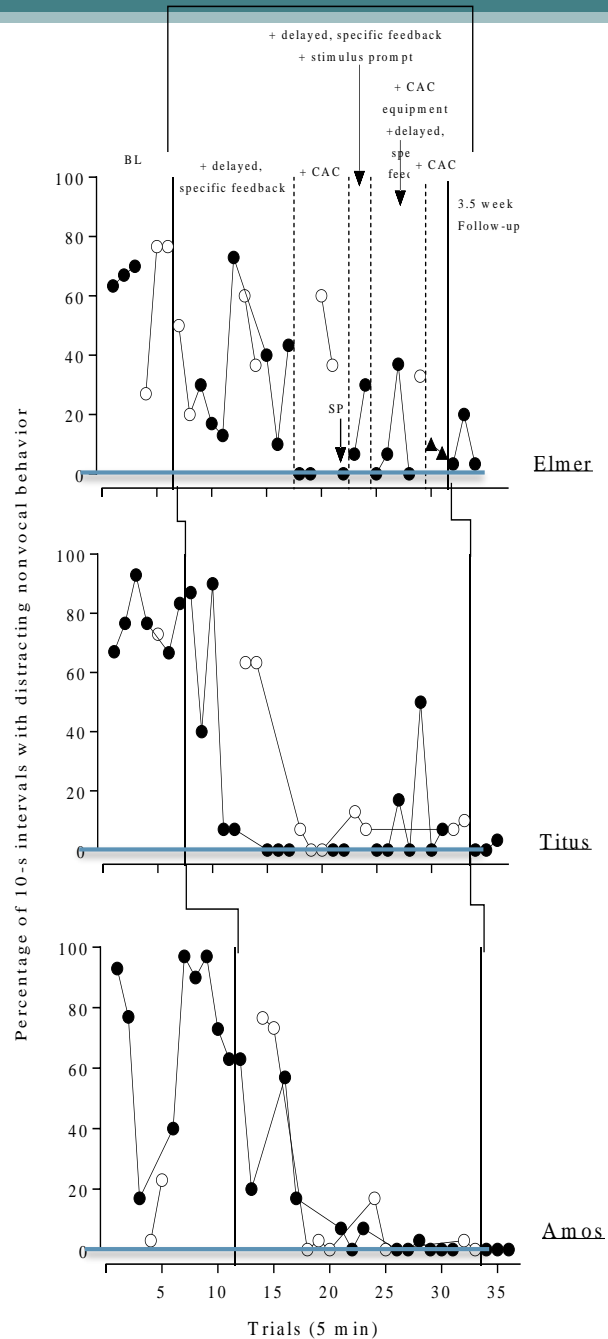




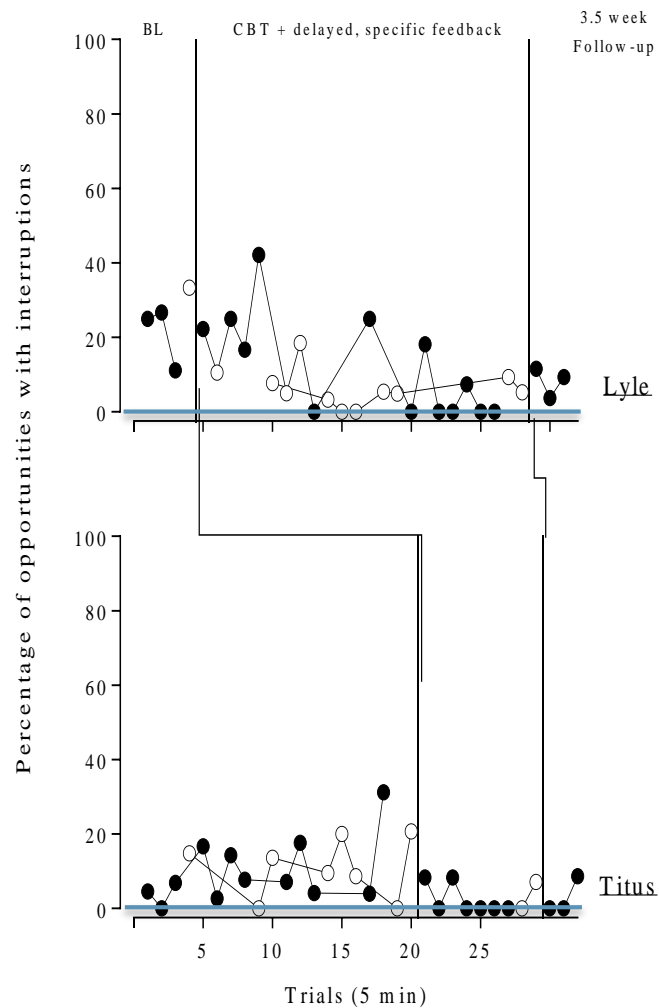


Social Validity of the Goals/Outcomes?

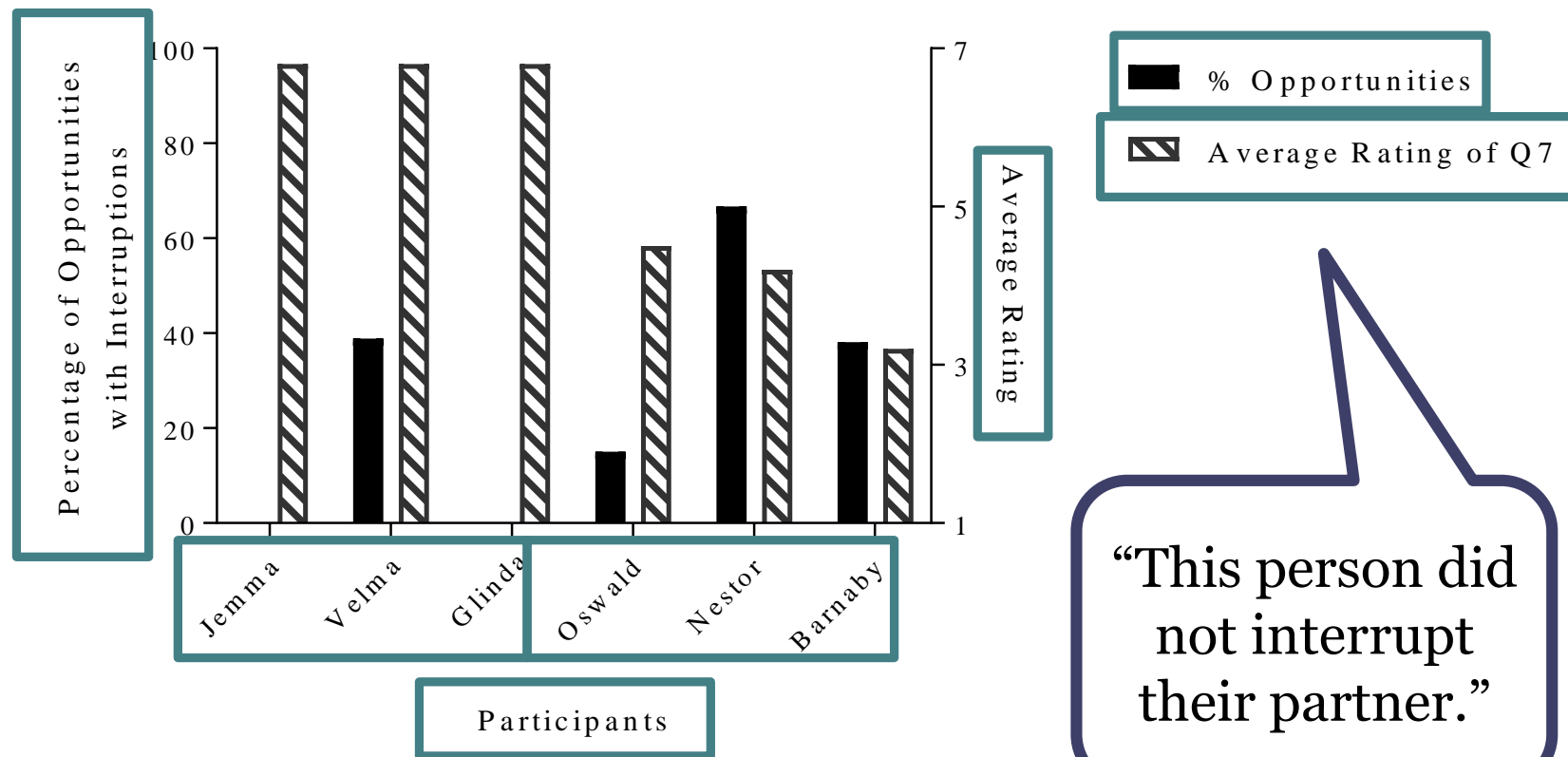
Highest/Lowest for Corresponding Question



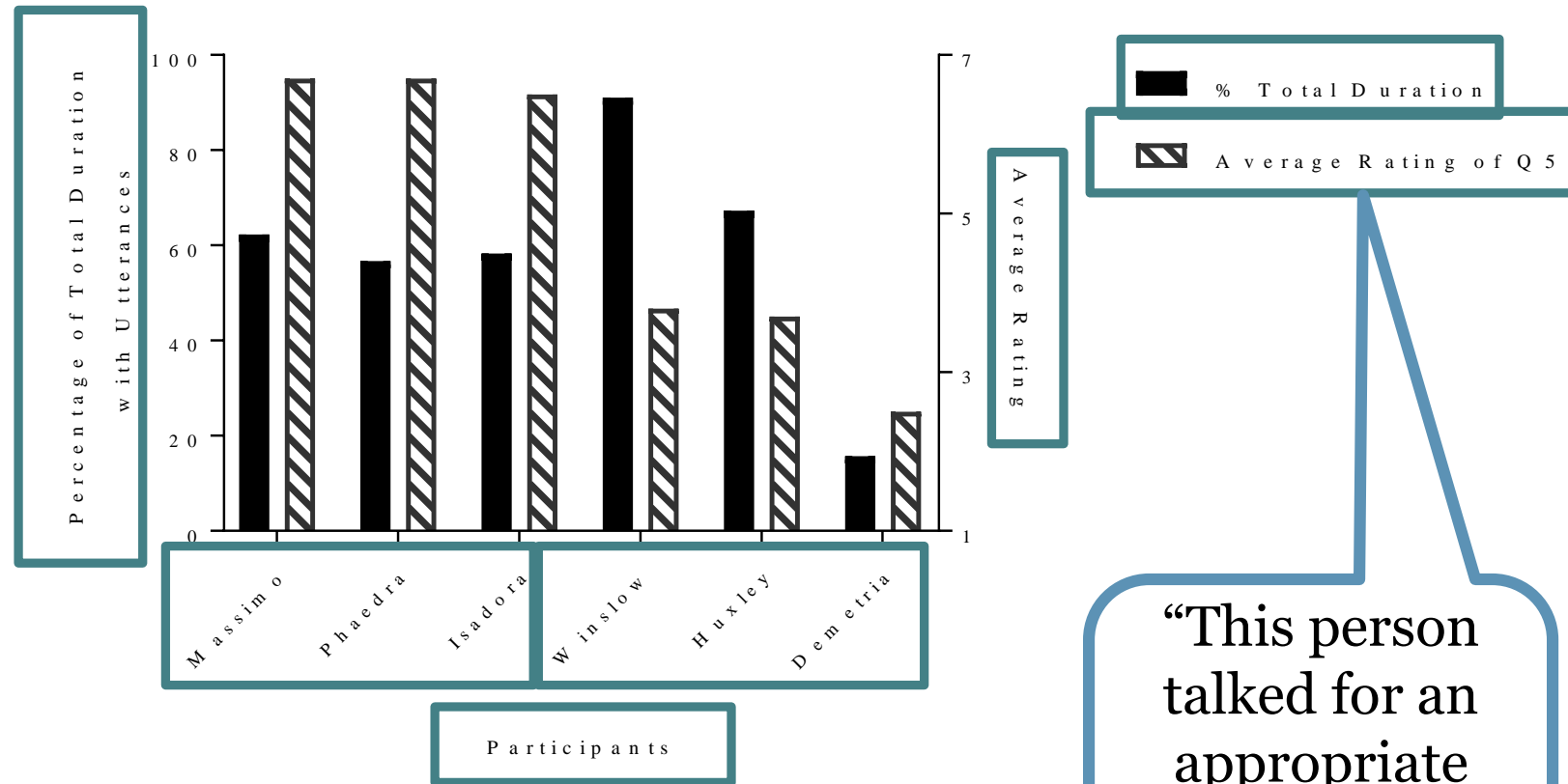
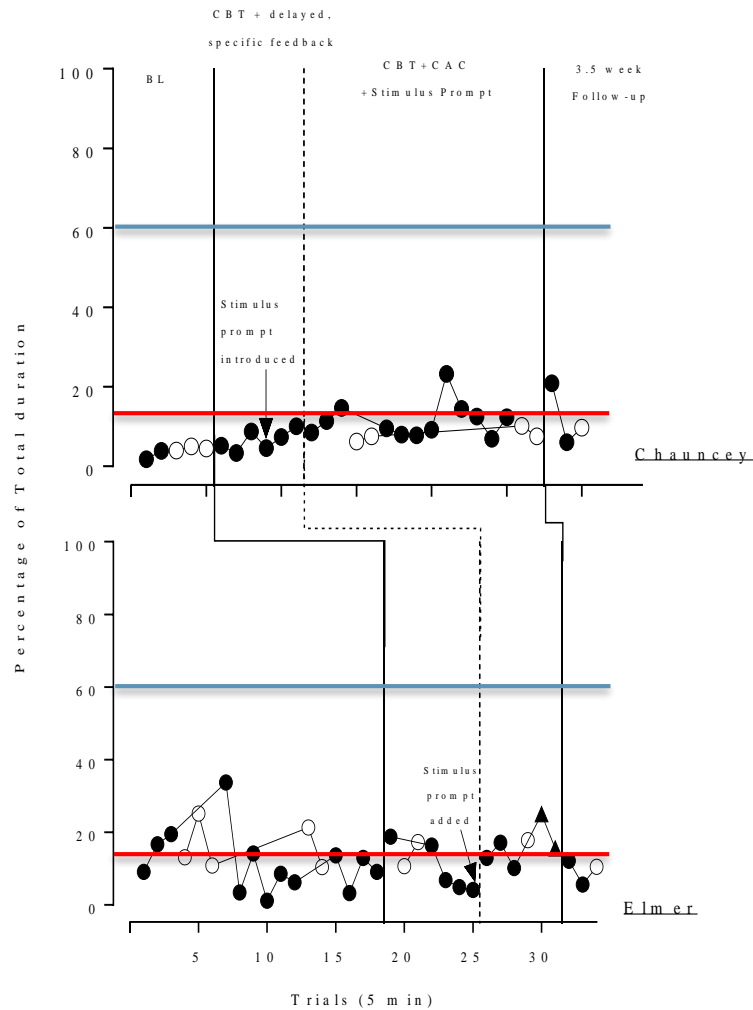
“This person did not do anything distracting.”



Highest/Lowest for Corresponding Question



Highest/Lowest for Corresponding Question



“This person talked for an appropriate amount of time.”

In Summary.....

- Youth with ASD arrive to college
 - Inadequately prepared
 - Inadequately supported
- Transition to college is HUGE
- Success requires large number/variety of skills
- Large literature on evidence-based interventions for children/teens with ASD (BST, video modeling)
- Start EARLY!

Resources

Video:

"Understanding Asperger Syndrome: A Professor's Guide."
Organization for Autism Research.

www.researchautism.org

Websites:

"Going to College." *Faculty Expectations.*

www.going-to-college.org/campuslife/faculty.html

Info about college programs:

<http://collegeautismspectrum.com/collegeprograms>

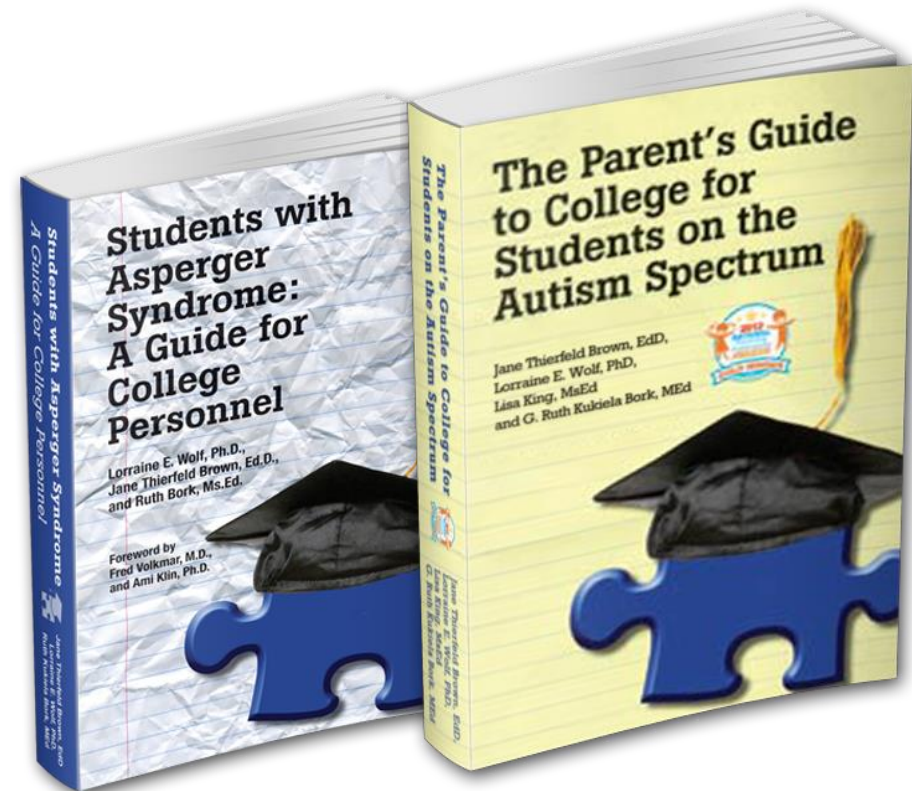
Resources

Books:

Zager, D., Alpern, C. S., McKeon, B., Mulvey, J. D., & Maxam, S. (2012). *Educating college students with autism spectrum disorders*. Routledge.

Wolf & Thierfeld Brown (2009)

Thierfeld, Brown, Wolf, King, & Bork (2012)



QUESTIONS?



Dorothea C. Lerman, Ph.D., BCBA-D
lerman@uhcl.edu