NEURODIVERSITY AND AUTISM: CONCEPTS, ISSUES, AND PRACTICAL STRATEGIES FOR STRENGTHS-BASED INSTRUCTION

Jason Travers and Leslie Bross,
University of Kansas

PRESENTATIONS MATERIALS AT:
http://bit.ly/2lz9NNO

AGENDA:

- OVERVIEW OF NEURODIVERSITY
  - DEFINITIONS, CONCEPTS, CONTROVERSY
- SPECIAL INTEREST AREAS
  - FOUNDATIONAL VALUES
    - Recognize, accept, prioritize
- BREAK (10 Minutes)
- Proposed Instructional Model
  - Identify the SIA
  - Match opportunities
  - Embedded Instruction
  - Evaluate and refine

HISTORICAL PERSPECTIVES

- Gap between "Normal" and Individual with ASD
  - "Normal" functioning
    - Average performance on various standardized measures.
      - Biased instruments
      - Biased samples
  - Deficit orientation
    - Language, communication, speech
    - Social interaction, attention, aloofness
    - Abnormal behavior, interests
- Eugenics
  - Pseudoscientific attempt to "clean" the gene pool
  - "Superior" human beings
  - Eliminate disabilities, criminals, addicts, etcetera

DEFINITION AND CLASSIFICATION OF AUTISM

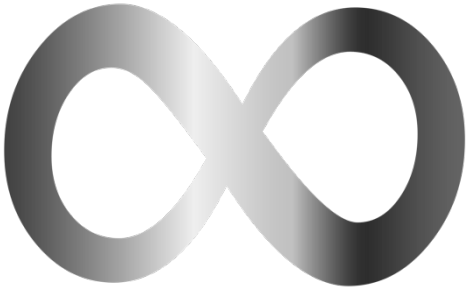
Impaired Social Communication Domain	Repetitive and Restricted Behaviors and Interests (RRBIs) Domain
• 1. Impaired social-emotional reciprocity • 2. Impaired nonverbal communication	• 1. Stereotyped or repetitive motor and vocal mannerism • 2. Inflexible adherence to routines or rituals • 3. Preoccupations and restricted interests • 4. Sensory behaviors

Note: Source: DSM-V

NEURODIVERSITY DEFINED (JAARSMA & WELIN, 2011)

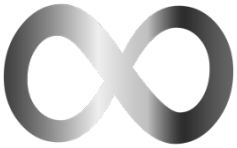
The struggle for the civil rights of all those diagnosed with neurological or neurodevelopmental disorders, such as

- attention deficit-hyperactivity disorder
- bipolar disorder
- developmental dyspraxia
- dyslexia
- epilepsy
- Tourette syndrome
- autism spectrum disorder



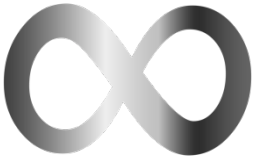
ORIGINS OF NEURODIVERSITY

- Term origin: Judy Singer
  - a sociologist diagnosed with Asperger Syndrome
  - An extension of identify politics
    - Affirmation of difference and formation of a group based on shared identity
      - e.g., AUTISTICS
    - Criticism: identity may be valued over ideals and values
      - May create division, increased polarization between groups



NEURODIVERSITY DEFINED

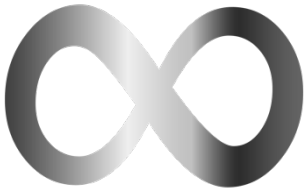
- "… the idea that variation in brain development and function should be appreciated and accepted as any other form of physical variation."
  - Eckert Laboratory (no date)
- "… the whole of human mental or psychological neurological structures or behaviors, seen as not necessarily problematic, but as alternate, acceptable forms of human biology."
  - Wolbring (2007)
- "… a philosophy of social acceptance and equal opportunity for all individuals regardless of their neurology."
  - Ventura (2010)



NEURODIVERSITY DEFINED

Tincani, Travers, & Boutot (2010):

- Discounts the clinical, deficit orientation
- Rejects ASD as a pathology
  - Particular disdain for research seeking "cures" for autism
- Questions the social institutions that rank people with ASD according to a hierarchy set by "neurotypicals"
- ASD as part of the normal continuum of human functioning
  - Not flawed, but simply different
- Movement to establish Autistic Culture
  - Much like Deaf Culture
- A Social Movement with a Civil Rights orientation



CONTROVERSY SURROUNDING ND

- An anti-treatment, anti-cure position
  - Equating a cure with genocide
  - Harsh criticism of Autistics who want a cure
  - Dilutes attempts to develop an autistic culture
    - e.g., cochlear implant as a threat to Deaf Culture.
- Acceptance taken to the extreme?
  - Consider an LD example
    - Reader doesn't like reading
- Acceptance does not improve relationships, communication, behavior

CONTROVERSY SURROUNDING ND

- Parents of children with severe impairments vs. ND proponents with HFA
  - Criticism of parents who seek intervention, ABA, specialized education
  - Conflating desire to treat with disrespect, violating human rights
- Group's values are prioritized over individual's
  - Example: Inclusion Debate
    - Full inclusion: Group values prioritized
      - Top down: Attitudes and beliefs about disability
    - Continuum: Stakeholder values prioritized
      - Bottom up: Individual outcomes, quality of life

CONTROVERSY ABOUT ND

- "ABA is autistic conversion therapy"

  "… if your child is getting classic ABA therapy, what you are seeing is an illusion. And what looks like progress is happening at the expense of the child's sense of self, comfort, feelings of safety, ability to love who they are, stress levels, and more. The outward appearance is of improvement, but with classic ABA therapy, that outward improvement is married to a dramatic increase in internal anxiety and suffering." ~Sparrow Rose Jones

CONTROVERSY ABOUT ND

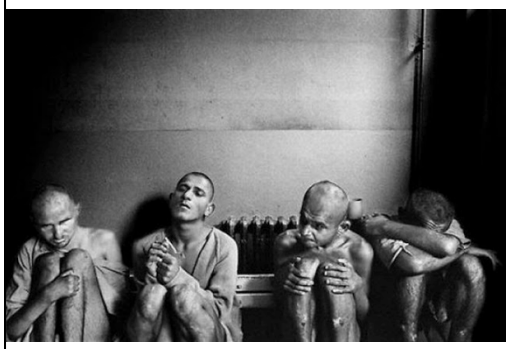
- Claims that ABA causes PTSD are major feature of the anti-treatment ND echo chamber
  - No evidence of this
- Anti-science attitudes common among ND advocates
  - Rampant acceptance and promotion of facilitated communication
    - And new variation Rapid Prompting Method
      - FC/RPM are core features of ND movement

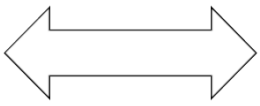
FACILITATED COMMUNICATION AND RAPID PROMPTING METHOD

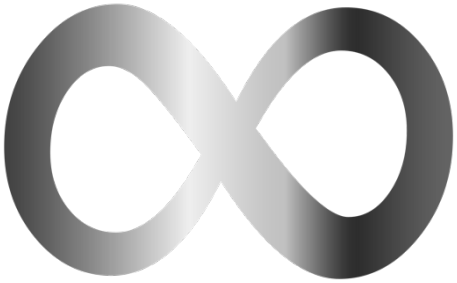
- Debunked method in which a facilitator explicitly or implicitly prompts a person to press keys (or point to letters on a stencil) to spell out messages
  - Overwhelming evidence that facilitators unwittingly generated the messages
    - Ideomotor response (Ouija board, dowsing, etc.)
- Resurgence of FC and emergence of RPM
  - Stories of liberation from trapped minds
  - Rejection of autism and intellectual disabilities as currently defined
  - Us/Them mentality
    - Skeptics treated as bigots

SUPPORT FOR FC AND RPM

- Syracuse University
- University of New Hampshire
- Massachusetts State Department of Elementary and Secondary Education
- University of Northern Iowa
- Vermont Department of Disabilities
- University of Virginia (Psychology Department)
- TASH
- Autistic Self Advocacy Network (ASAN)
- Autism Society of America
- Autism Speaks



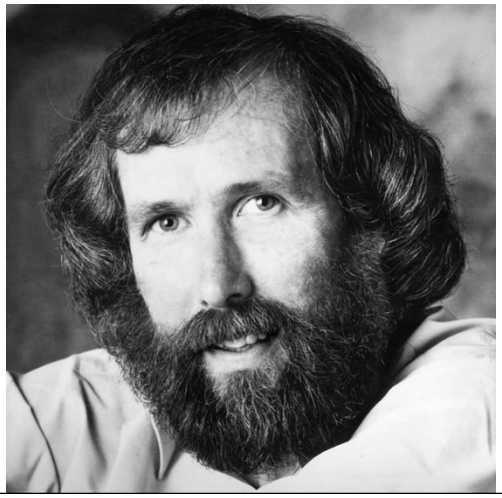
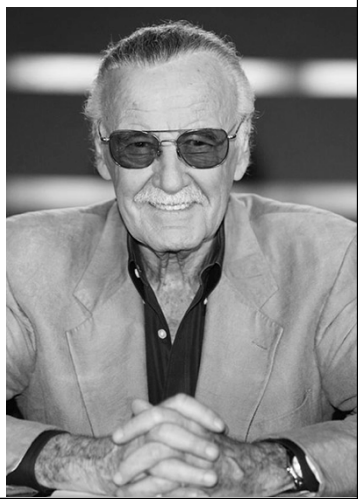


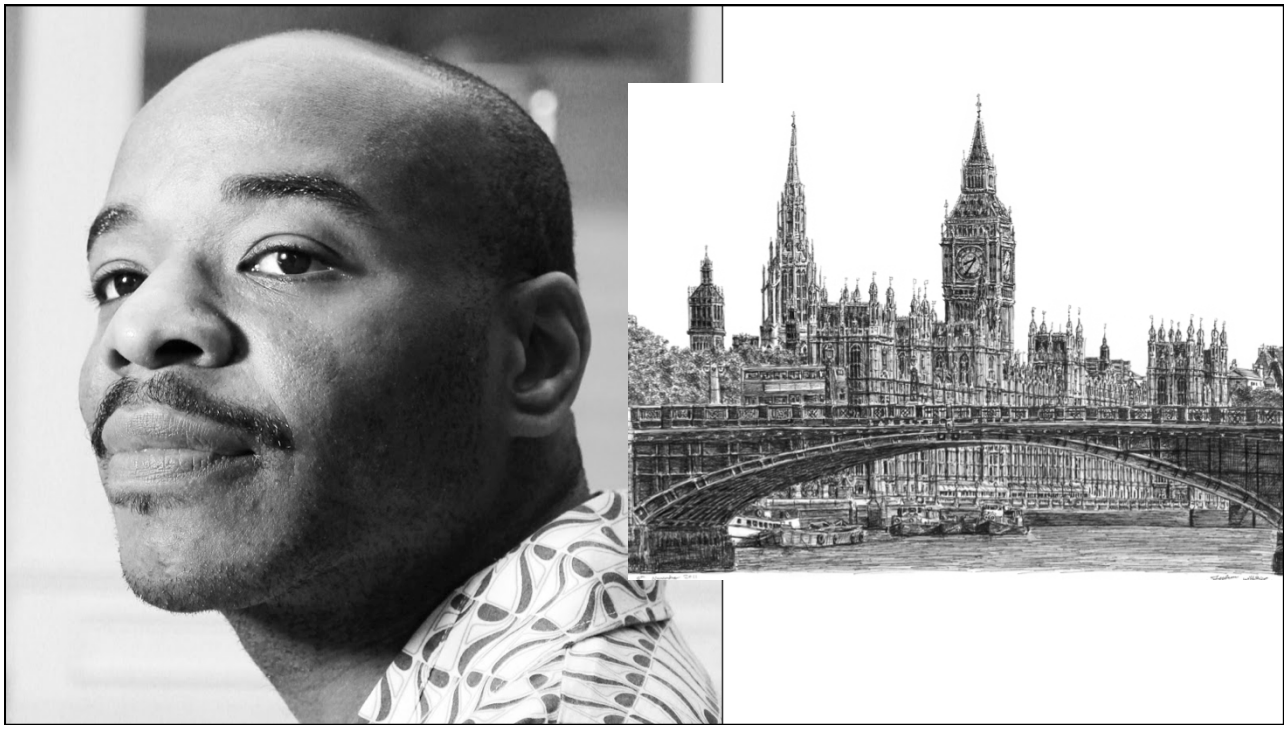


SPECIAL INTERESTS

- Identify strengths, interests, & preferences of individuals with autism
  - Use results to design instruction
    - Special interest area assessment
    - Designing instructional opportunities with SIAs
    - Embedding SIAs into daily activities
- But what about inappropriate SIAs?

PEOPLE WITH "INAPPROPRIATE" SPECIAL INTERESTS



STEREOTYPING & ND

- Not all are savants
  - Only about 10% of people with ASD have savant-like skills
- But all have strengths, interests, preferences
  - Enriching experiences
  - Increased attention, engagement
  - Potential long-term benefit
- SPECIAL INTEREST AREAS
  - many be more common in individuals with higher-functioning autism

SPECIAL INTERESTS AND IDENTITY

"I don't *just <u>like</u>* airplanes, airplanes are *<u>who I am</u>*."

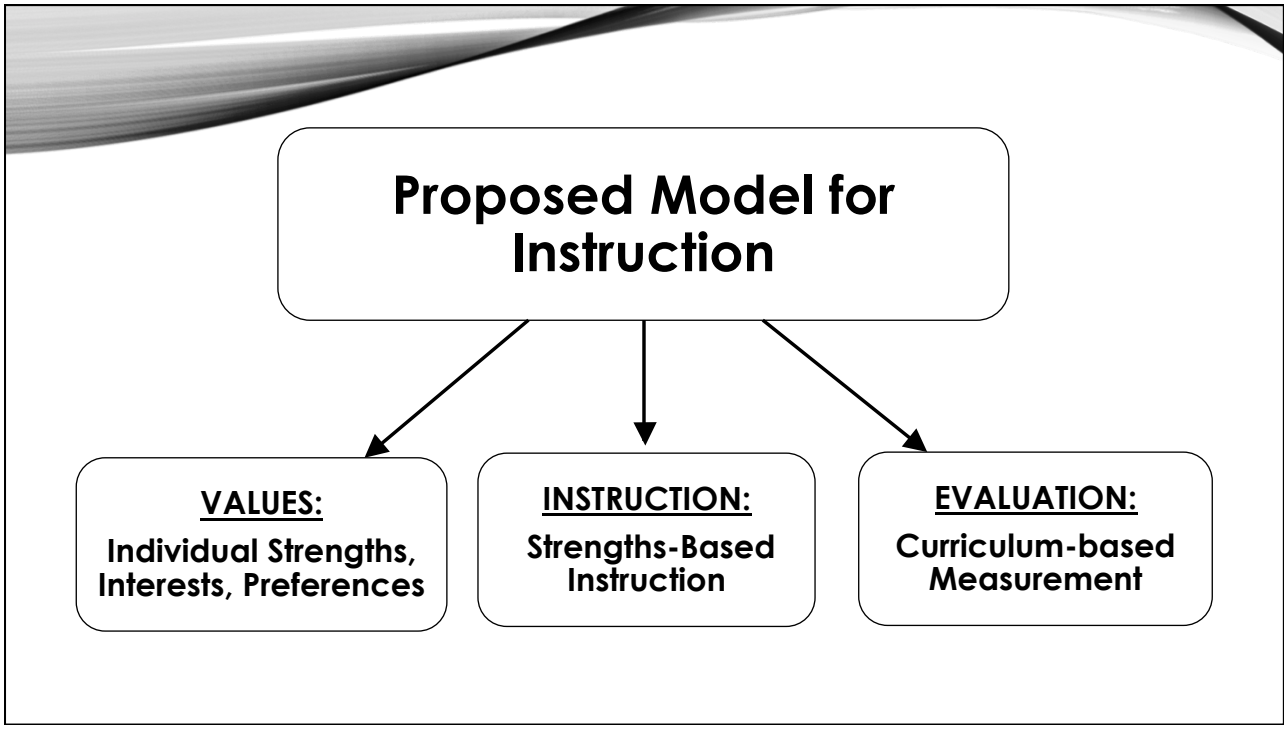
- SIAs as an integral part of the individual's identity
  - More than merely hobbies or leisure activities
- Limiting a child's SIA when it interferes with learning
  - Is this necessary?
  - Could SIAs be useful for delivering an individualized education?

STRENGTHS-BASED APPROACH: BENEFITS OF SIA

Engagement in the SIA may result in:

- **Academic skill strengths-** higher motivation and interest levels.
- **Communication skills-** more advanced vocabulary when talking about the SIA.
- **Social skills-** more willing to interact with others.
- **Emotional strengths-** lower anxiety, more relaxed.
- **Sensory strengths-** higher tolerance to aversive stimuli.
- **Fine motor strengths-** higher level of abilities relative to specific SIAs (e.g., working with clay, video controllers).
- **Executive functioning strengths-** improved focus and memory.

Winter-Messiers et al., 2007.



ND MODEL OF INSTRUCTION: **VALUES**

- **Prioritize** the individual's needs, quality of life, outcomes
  - Over perceptions, attitudes, beliefs of others in society
- **Recognize** strengths, interests, and preferences
  - "Special Interest Areas"
- **Accept** that interests often are fundamental to an identity and can support educational outcomes
  - But some SIAs may be perceived by some as inappropriate

SIAS AND BULLYING

SIAs can possibly lead to shame, embarrassment, and exclusion.

Example: Secondary student who retains seemingly immature SIAs through high school (e.g., My Little Pony).

RECOGNIZING SPECIAL INTEREST AREAS

The strengths, interests, and preferences of ND students

SPECIAL INTEREST AREAS?

SIAs may be characterized by:

(a) significant depth and breadth of knowledge about a specific topic,

(b) difficulty attending to other important information in the environment due to preoccupation with the SIA,

(c) engagement in prolonged periods of study or focus on content related to the SIA, and

(d) a strong intensity in focus uncommon for neurotypical peers.

"THOSE PASSIONS THAT CAPTURE THE MIND, HEART, TIME, AND ATTENTION OF INDIVIDUALS WITH [ASD], PROVIDING THE LENS THROUGH WHICH THEY VIEW THE WORLD."

Note: Source: Winter-Messiers, 2007

Common SIAs

- Animals
- Comic books
- Japanese anime
- Plants and nature
- Pop culture movies, TV shows, singers
- Super heroes
- Transportation
- Video games

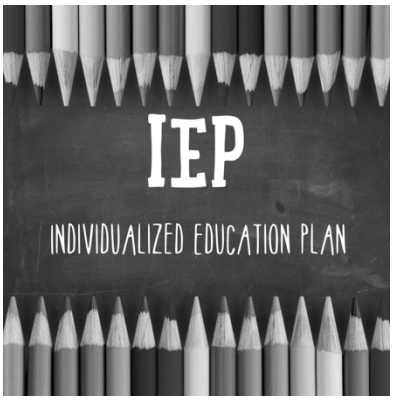
Obscure SIAs

- Drawing specific logos or emblems
- The Titanic
- Photocopy machines
- Rugs
- Vacuum cleaners
- Salt shakers
- Sports statistics


20th
CENTURY
FOX

STRENGTHS-BASED APPROACH: ACTION STEPS

- Professionals should capitalize upon the power of SIAs.
- SIAs can be utilized throughout the school day in K-12 classrooms in academic, behavior, and social skills supports.
- Comprehensive support plans:
  - Utilize SIAs while simultaneously aligning to IEP goals.
- SIAs also should be utilized during **transition planning**.

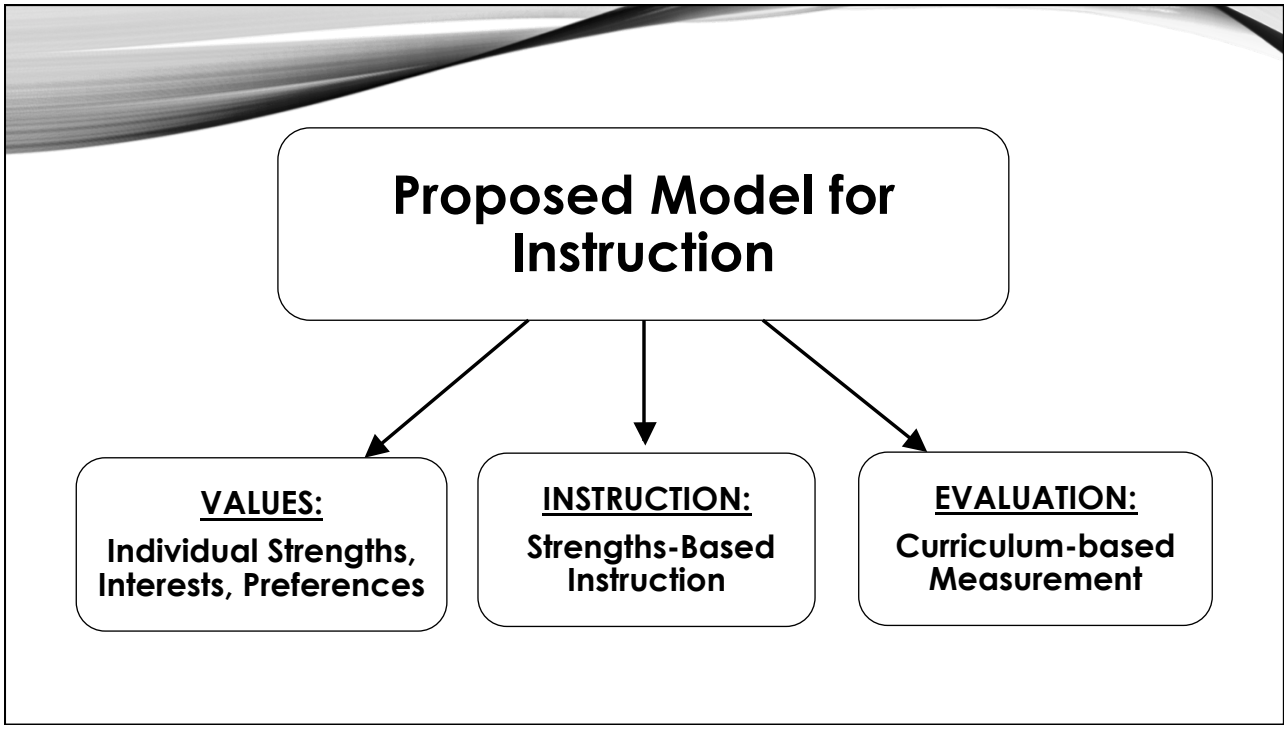


STRENGTHS-BASED APPROACH: TRANSITION PLANNING

- Hans Asperger (1944): "We can see in the autistic person, far more clearly than with any normal child, a predestination for a particular profession from earliest youth."
- Many companies, such as Microsoft, Walgreen's, and Freddie Mac (Viginia-based mortgage-finance firm), have developed initiatives to hire employees with autism.

STRENGTHS-BASED APPROACH: TRANSITION PLANNING

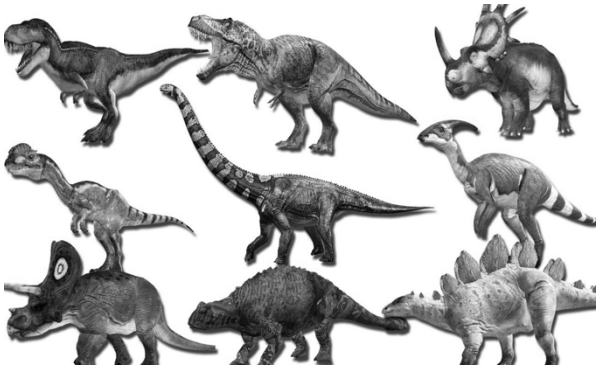
"This is not about social responsibility or philanthropy….SAP values the unique skills and abilities that people with autism bring to the workplace."
– Jose Velasco, head of SAP, German software company


Proposed Model for Instruction
VALUES:
Individual Strengths, Interests, Preferences
INSTRUCTION:
Strengths-Based Instruction
EVALUATION:
Curriculum-based Measurement

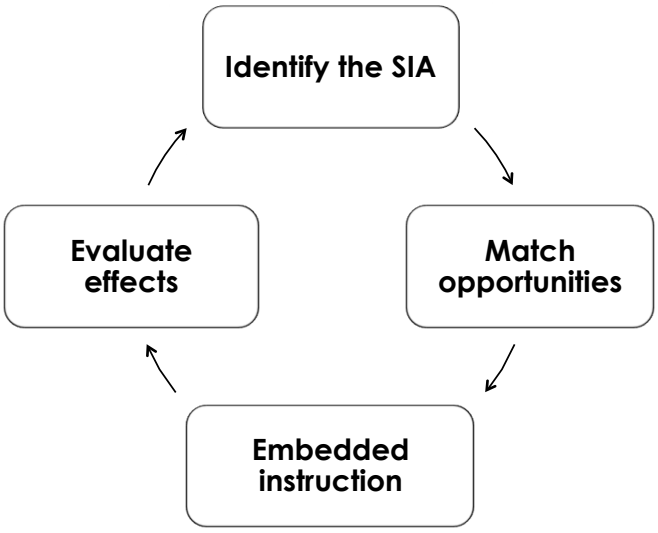

STRENGTHS-BASED INSTRUCTION: USING SPECIAL INTEREST AREAS

MEET CHELSEY

MEET NICK



SIA INSTRUCTIONAL MODEL



STEP #1: PREFERENCE ASSESSMENTS TO IDENTIFY THE SIA

PREFERENCE ASSESSMENTS

- SIAs are sometimes obvious, sometimes unclear.
- Solution?
  - Conduct preference assessments
    - Why? Match SIA to learning experiences.
- TWO Broad Categories of Preference Assessment: **Indirect** and **Direct** preference assessments.

PREFERENCE ASSESSMENT TYPES

- INDIRECT PREFERENCE ASSESSMENT
  - Open-ended questions
    - Asks parents, teachers
    - Ask the learner
  - Informal Observation
    - See what the child selects
  - Rank Ordering Activities
- DIRECT PREFERENCE ASSESSMENT
  - Single Stimulus
  - Paired Choice
  - Multiple Stimulus Preference Assessments
    - With replacement
    - Without replacement

OPEN-ENDED QUESTIONAIRE

- Purpose: identify specific items or activities that are highly preferred
- May be conducted with:
  - Teachers
  - Parents/caregivers, siblings
  - Student
- Benefit: simple, short, clear
- Limitations:
  - Nonverbal/non-communicative children cannot respond
  - Answers may be inaccurate; may need to confirm via direct assessment

Parents complete activity engagement log. How many minutes per week does Nick engage in specific activities after school?

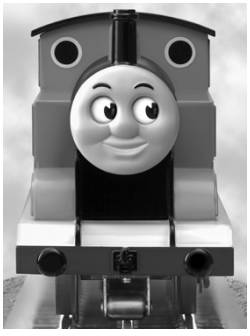
Activity	Mon	Tues	Wed	Thurs	Fri	Total minutes per activity
Dinosaur books	60	45	30	40	50	225
Playing video games	20	25	0	15	20	80
Time with friends	0	0	60	0	0	60
Listening to music	0	0	0	0	10	10

OPEN-ENDED QUESTIONNAIRE

- "What do you like to do in your free time?"
- "What do you like to read about?"
- "What are your favorite TV programs?"
- Follow up with parents as needed:
  - "What does he typically do after school?"
  - "Would she rather watch a movie or play on the iPad?"
  - "How does he typically engage in the SIA?"
  - "How does the SIA impact the family?"

OPEN-ENDED QUESTIONNAIRE

- A clear SIA may be revealed by questionnaire
  - Move on to matching opportunities and embedding instruction (next step)
- Unsure? Need confirmation or better understanding?
  - Proceed with additional preferences assessment
    - Informal observation



INFORMAL OBSERVATION

- Set up options for selection
  - Centers, playground, free choice.
- Observe child's selection during "Free operant" condition; or choice time
- Record:
  - selection
  - length of time engaged
  - occurrences of desired and undesired behavior
- Benefit: unobtrusive, good for nonverbal kids
- Limitations: may require frequent and lengthy session

RANK-ORDERING ACTIVITIES

Directions: *Put the activities in the order that you like the best (#1, #2, and #3).*

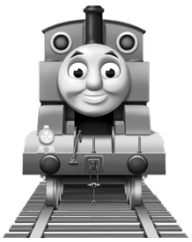
Toy

Puzzle

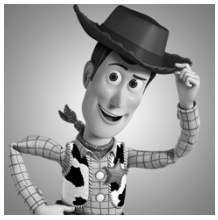
iPad application

RANK-ORDERING ACTIVITIES

Directions: *Put the characters in the order that you like the best (#1, #2, #3, #4, and #5).*

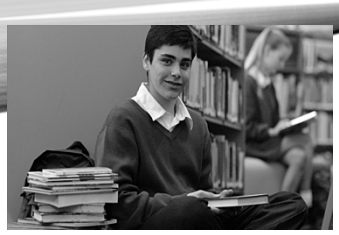

Thomas the Train


Paw Patrol


Toy Story


Clifford


Sponge Bob



RANK-ORDERING ACTIVITIES

Directions: *Rank the following activities in order from most preferred (#1) to least preferred (#12).*

___ Japanese anime
___ *Going to the movies*
___ *Listening to music*
___ *Dinosaurs*
___ *Superheroes (e.g., Batman)*
___ *Animals*
___ *Comic books*
___ *Flags from different countries*
___ *Nature, plants, flowers*
___ *Cars*
___ *Write your own here:* _____
___ *Write your own here:* _____

PREFERENCE ASSESSMENT TYPES

- INDIRECT PREFERENCE ASSESSMENT
  - Open-ended questions
    - Asks parents, teachers
    - Ask the learner
  - Informal Observation
    - See what the child selects
  - Rank Ordering Activities
- DIRECT PREFERENCE ASSESSMENT
  - Single Stimulus
  - Paired Choice
  - Multiple Stimulus Preference Assessments
    - With replacement
    - Without replacement
  - Ecological Assessment

Note: Source: Cooper, Heron, & Heward, 2007.

DIRECT PREFERENCE ASSESSMENTS

1)Single stimulus preference assessment

2) Paired choice preference assessments (also known as forced choice)

3)Multiple stimulus preference assessment
- With replacement
- Without replacement

4) Ecological assessments

Note: Source: Cooper, Heron, & Heward, 2007.

SINGLE STIMULUS DIRECT ASSESSMENT

- A stimulus is presented and a student's reaction to it is described and recorded.
- May be best suited for students with difficulty selecting from two or more stimuli.
- Example: Chelsey and a different Disney character.

DIRECT PREFERENCE ASSESSMENTS

1)Single stimulus preference assessment

2) Paired choice preference assessments (also known as forced choice)

3)Multiple stimulus preference assessment
- With replacement
- Without replacement

4) Ecological assessments

Note: Source: Cooper, Heron, & Heward, 2007.

PAIRED CHOICE PREFERENCE ASSESSMENTS

- Collect several items or activities you suspect are preferred
- Present two items/activities to student
  - Record the selected as "preferred" and unselected "non-preferred"
- Present two "preferred" items/activities to student
  - Record selected as "more preferred" and unselected as "less preferred"
- Repeat with two "more preferred"
  - "Most preferred" and "More preferred"
- Result is list of
  - Most preferred
  - More preferred
  - Preferred
  - Non-preferred

PAIRED CHOICE PREFERENCE ASSESSMENT

Trial #	More Preferred Results	Most Preferred (Selected)
1	Dinosaur books and comic books	Dinosaur books
2	Dinosaur books and listen to music	Dinosaur books
3	Comic books and listen to music	Comic books
4	Take a walk and comic books	Comic books
5	Take a walk and listen to music	Take a walk
6	Take a walk and dinosaur books	Dinosaur books

DIRECT PREFERENCE ASSESSMENTS

1. Single stimulus preference assessment
2. Paired choice preference assessments (also known as forced choice)
3. **Multiple stimulus preference assessment**
   - **With replacement**
   - **Without replacement**
4. Ecological assessments

Note: Source: Cooper, Heron, & Heward, 2007.

MULTIPLE STIMULUS PREFERENCE ASSESSMENT WITH REPLACEMENT

Multiple stimuli are presented and the student chooses a stimulus. The chosen stimulus is replaced back and items not chosen are replaced with new ones.

Trial #	Free time choice activities during social skills class	Student selection
1	Dinosaur books, listening to music, taking a walk	Dinosaur books
2	Dinosaur books, comic books, drawing	Dinosaur books
3	Dinosaur books, play a card game, play Jenga	Play Jenga

MULTIPLE STIMULUS PREFERENCE ASSESSMENT WITHOUT REPLACEMENT

Multiple stimuli are presented and the student chooses a stimulus. The chosen stimulus is NOT replaced back and the remaining stimulus are rearranged and the next trial begins. Items are ranked on preference of which was selected first, second, third, etc.

Trial #	Free time choice activities during social skills class	Student selection
1	Dinosaur books, listening to music, play Jenga, comic books, drawing	Dinosaur books
2	Listening to music, play Jenga, comic books, drawing	Play Jenga
3	Listening to music, comic books, drawing	Comic books
4	Listening to music, drawing	Drawing
5	Listening to music	Listening to music

DIRECT PREFERENCE ASSESSMENTS

1)Single stimulus preference assessment

2) Paired choice preference assessments (also known as forced choice)

3)Multiple stimulus preference assessment

- With replacement
- Without replacement

4) Ecological Assessments

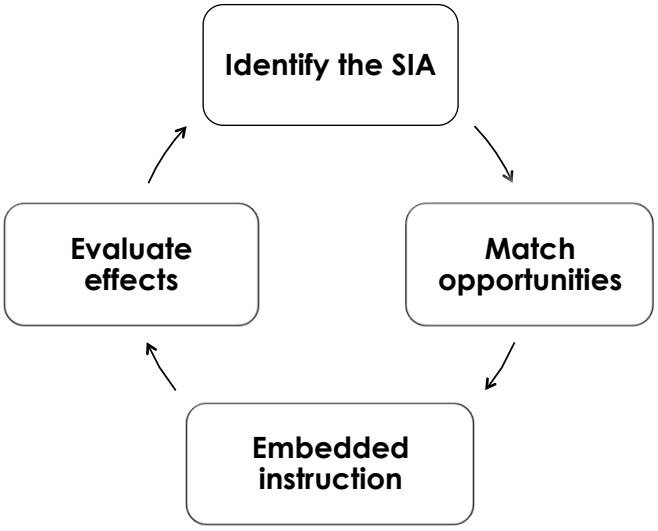
Note: Source: Cooper, Heron, & Heward, 2007.

ECOLOGICAL PREFERENCE ASSESSMENTS

- Direct observation conducted throughout the school day may reveal information about the student's SIA.
- Teacher can provide free access to a variety of activities/items and record how long the student engages in the activity.
- This can occur in multiple environments (e.g., cafeteria, playground, classroom).
- Total time should be summed for each activity to determine which is most preferred.

STEP #2: MATCH OPPORTUNITIES FOR SIA ENGAGEMENT WITHIN THE SCHOOL AND COMMUNITY

SIA INSTRUCTIONAL MODEL



EXAMPLE SECONDARY OPEN MEMBERSHIP CLUBS

- Anime Club
- Art Club
- Chess Club
- Comic Club
- Family, Career and Community Leaders of America (FCCLA)
- French Club
- Gay, Straight Alliance
- Literary Society
- Math Club
- Photography Club
- Science Knowledge Bowl
- Spanish Club
- Theatre
- Trapmaster's
- Writer's Circle
- Youth in Government (YIG)

EXAMPLE SECONDARY CO-CURRICULAR ACTIVITIES

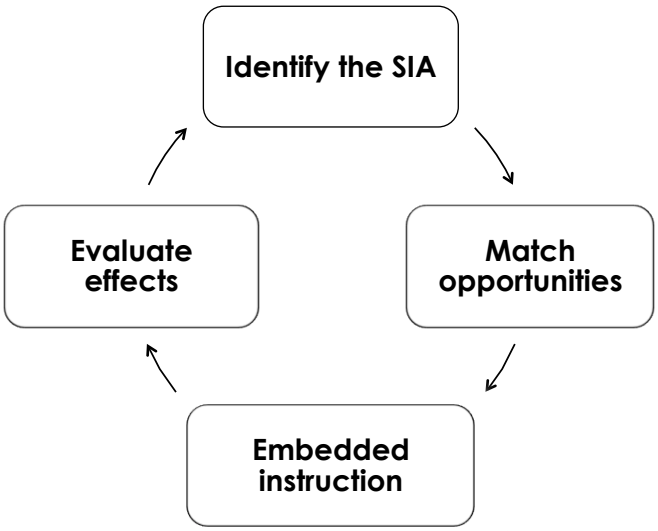
- AFJROTC
- Band
- Broadcast Journalism
- Cheerleading
- Debate
- DECA
- Future Educators of America
- Forensics
- Newspaper
- Orchestra
- Vocal Music Programs
- Yearbook

EXAMPLE SECONDARY COMMUNITY EXPERIENCES

- Independently owned businesses unique to the local community (e.g., A Thyme for Everything)
- Car dealerships
- Comic book or video game stores
- Garden or lawn centers
- Restaurants (e.g., Applebee's, Panera Bread Company)
- Veterinarian offices, retail pet stores, or animal shelters

STEP #3: EMBEDDED INSTRUCTION WITH THE SIA THROUGHOUT THE STUDENT'S SCHOOL DAY

SIA INSTRUCTIONAL MODEL



EMBEDDING INSTRUCTION

- Organizing environments that provides multiple and varied opportunities to learn a skill
  - And integrates student SIAs
- Have an enjoyable and meaningful teaching/learning experience.
- Combine multiple antecedent-based and consequence-based strategies
  - SIAs may prevention challenging behavior (antecedent strategy)
  - Embedding instruction and SIAs may increase contact with natural reinforcers

BENEFITS OF EMBEDDED INSTRUCTION

- Using preferred activities, materials, content, equipment, and etcetera can do the following:
  - Decrease motivation to escape work because it's not really work; it's fun!
  - Promote simultaneous learning of a variety of skills
- Provide multiple and varied opportunities to learn
  - Promotes generalized learning with natural cues and reinforcers

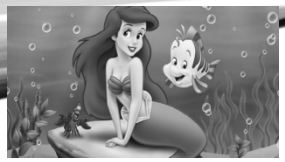
EXAMPLE IEP TRANSITION GOALS

#1: Throughout his senior year, Nick will apply for a minimum of 5 jobs for planned employment during Summer 2017.
#2: Nick will participate in mock interviews during his social skills class and will score a minimum of 85% on 3 out of the 4 evaluations completed by the mock interview judges.
#3: During structured social skills group with peers who share Nick's special interest area, Nick will ask a minimum of 3 on-topic questions to peers to show interest in the peers.
#4: In his community-based work program, Nick will score a minimum of 85% on the daily evaluation completed by himself, employer, and job coach on 3 out of 4 days per week for 10 consecutive weeks.

DAILY ACTIVITY	TIME	SIA Engagement	IEP Goal Development
Before school starts			
1st hour Algebra/Geometry II			
2nd hour English 12			
3rd hour Foundations of Design			
Mentoring/ homeroom			
4th hour Drama			
5th hour/ Lunch Social Development			
6th hour & 7th hour Community-based work program			
After school			

INTEGRATION OF DINOSAUR SIA IN ACADEMIC CURRICULUM

Academic areas	SIA of dinosaurs integrated
Reading	Read encyclopedia entries on specific dinosaurs.
Writing	Research and write a paper on stegosaurus.
Spelling	Learn to spell names of dinosaurs.
History	Research the Mesozoic Era.
Math	Write story problems about tons of leave consumption by Triceratops.
Science	Research the different theories of extinction.
Art	Design and build a clay or paper mache model of the pterodactyl.
Internet skills	Research the paleontology wing of the Smithsonian Institute in Washington, DC.



ARIEL SIA IN KINDERGARTEN

Academic areas	SIA of Little Mermaid
Morning Meeting	**Include song(s) from film "The Little Mermaid" and sequels**
Centers	**Dress up: Mermaid clothing; Blocks: Mermaid figures; Sensory Table: Fish & Sea Animals; Art: Printed images of Characters; Science: Ocean life**
Seat Work	**Tracing sheets with characters; mermaid manipulatives; mermaid pencil**
Recess	**Pretend scenes from films with props**
Lunch	**Mermaid lunchbox, mermaid placemat, mermaid book when finished eating**
Story/Reading	**Mermaid books, marine life books, other stories with mermaids and/or fish (Nemo, Dory, etc.)**
Centers	**Dress up: Mermaid clothing; Blocks: Mermaid figures; Sensory Table: Fish & Sea Animals; Art: Printed images of Characters; Science: Ocean life**
Dismissal	**Little Mermaid sticker delivered by bus driver**

INDIVIDUALIZED LESSON PLANNING

- Insert daily schedule and people in the activities matrix
- Identify student & list IEP benchmarks in top row
  - Ex: greeting peers; following directions
- Brainstorm session
  - What activities are already in place?
  - How can the SIA be embedded into existing activities?
    - Be creative! Have FUN!
- Begin identifying
  - Where, what materials, who, how

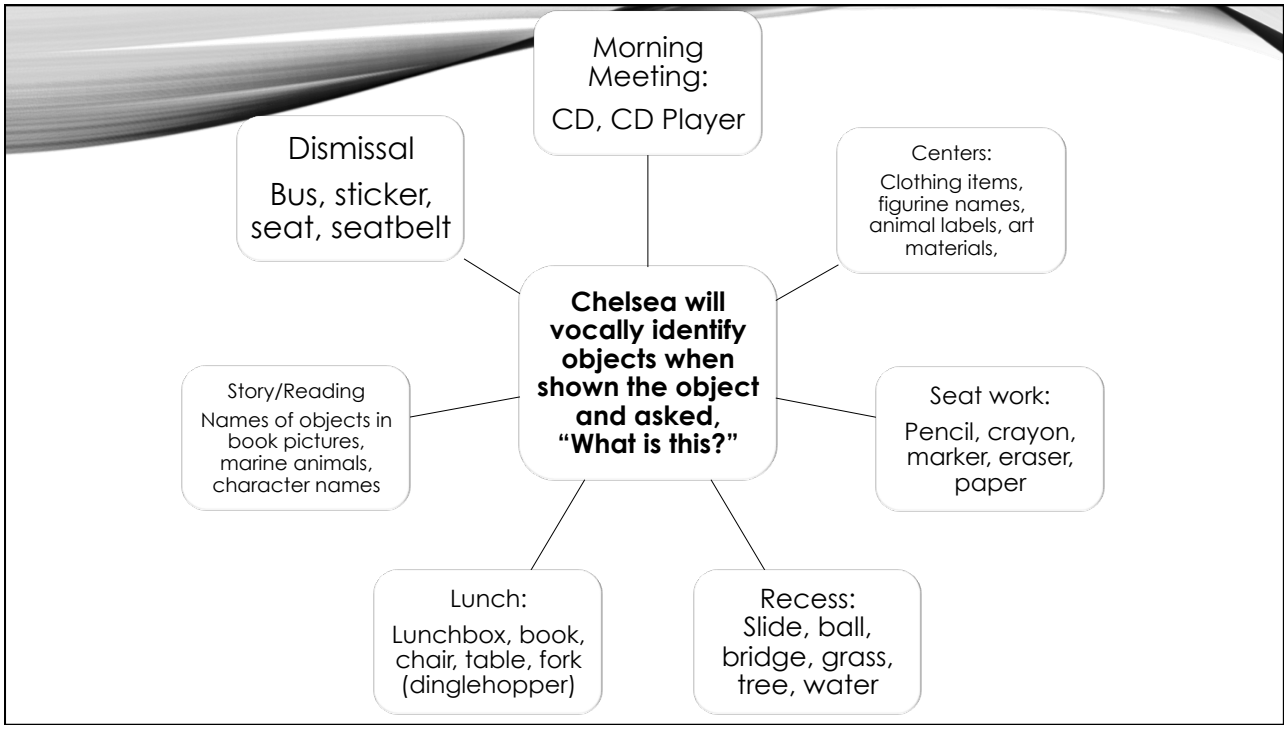
Student: **Robert**

Teacher: **Pam**

Skills to be Taught/Maintained

Activity (location)	Time/Instructor	Greet	Raise hand	Reach	Use communication book (requests)	Schedule following	Take turns	Object ID
Arrival	8:30/Pam	X		X	X	X		X
Class meeting/calendar	8:45/Pam	X	X	X	X	X	X	
Computer	9:00/Bob			X	X	X	X	
Individualized Instruction	9:30/Pam			X	X	X		X
Snack/Leisure (choice time)	10:15/Pam 10:45/Bob	X		X	X	X	X	X
Small-group instruction	11:15/Pam		X	X	X	X	X	
Lunch	12:00/Pam/Peer	X		X	X	X	X	X
Specials (art/music/PE)	1:00/Tom/Peer	X	X	X	X	X	X	X
Community	1:30/Lisa	X		X	X	X		
Clean-up	2:30/Pam/Peer			X	X	X		
Departure								

Adapted from: Westling, D. L. & Fox, L. (2004). Teaching students with severe disabilities, 3rd Edition. Columbus, OH: Prentice Hall.



EXAMPLE: LEARNING WITH BLOCKS/LEGOS

- Writing
- Waiting/taking turns
- Listening
- Responding
- Passing
- Looking/attention
- Pretending
- Following directions
- Vocabulary
- Colors
- Shapes
- Adding
- Subtracting
- Motor development

EXAMPLE: CREATE DIGITAL BOOKS

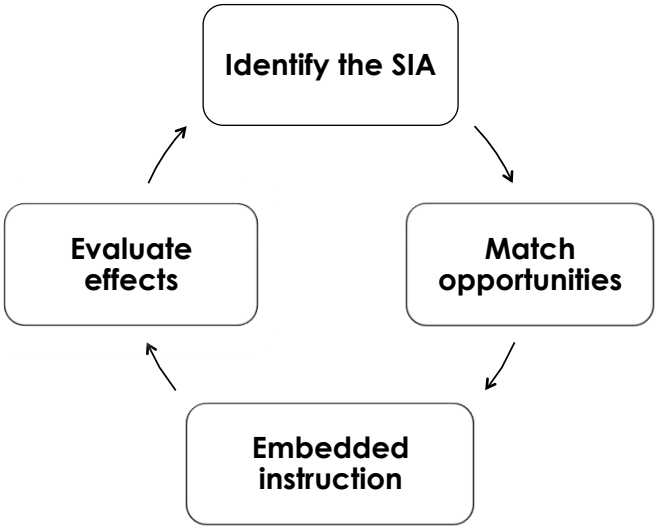
1. Search the web for images related to Toy Story, a preferred movie/characters
2. Save, find, copy/paste images (cognitive skills; saving/retrieving)
3. Fine motor skills for basic typing, mouse movement and control, left & right clicking
4. Letter knowledge and sounds
5. Concepts of print (words have meaning)
6. Identifying features of the characters (colors, body parts)
7. Repeating sounds of letters (T says /t/) practicing mastered sounds
8. Exposure to verb "tells" and "going"; imitate saying Sunnyside.
9. Following directions
10. Social interactions with adults; reading story to peers (memorized the lines of the book)
11. Wait for teacher directions
12. Answer "Wh" questions from teacher, peers (Who is this? Who said Sunnyside is a bad idea"? Where are they?")

T

Woody tells Buzz that going to Sunnyside is a bad idea.

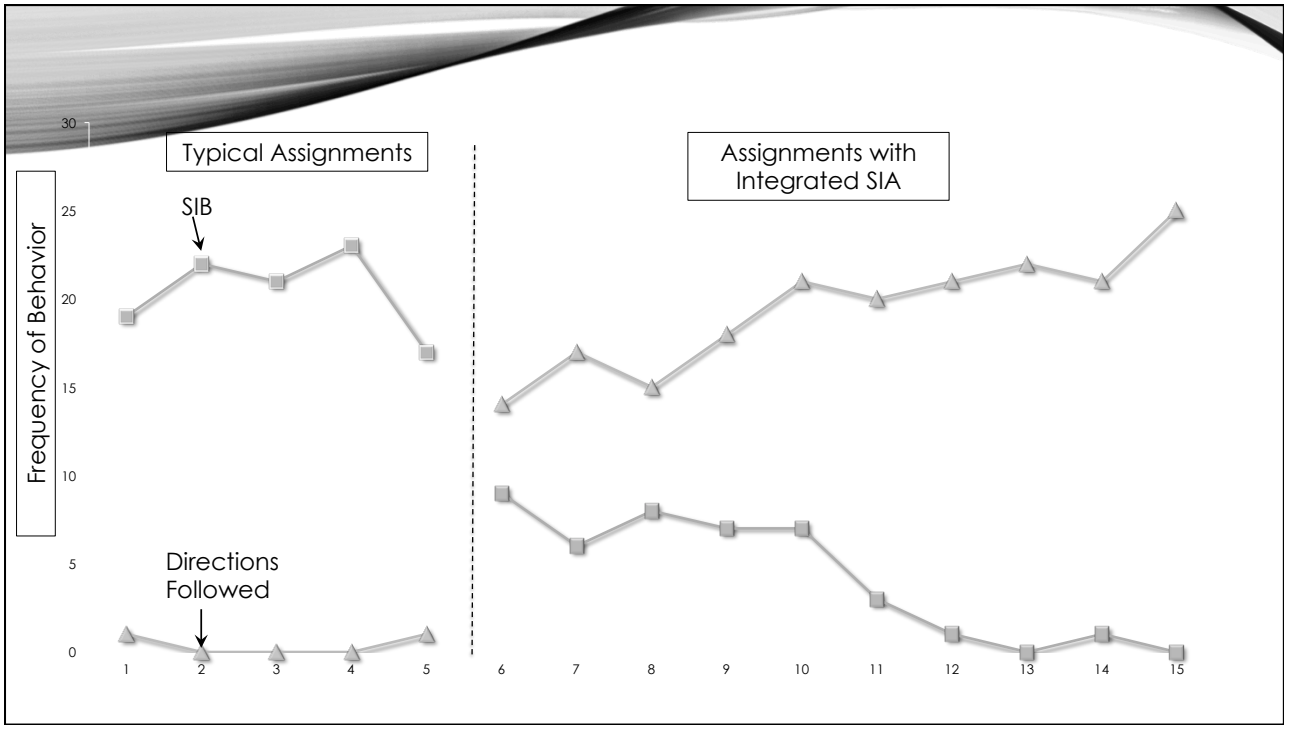
STEP #4: EVALUATE SIA INTERVENTION EFFECTS

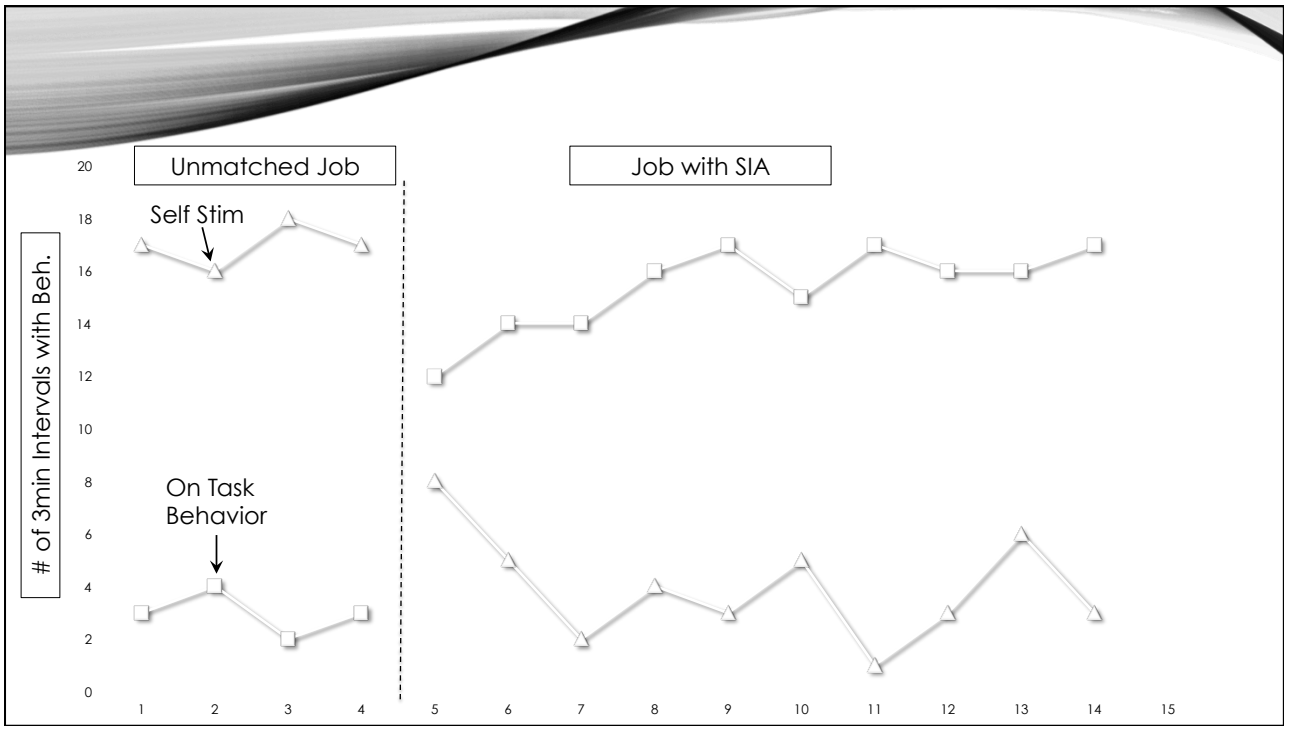
SIA INSTRUCTIONAL MODEL



CURRICULUM BASED MEASURES

- Define skills to be performed
- Provide intervention
- Measure skill performance
  - Duration: how long (engagement, self-stim)
  - Frequency: tasks completed, vocal outbursts/protest,
  - Percent: amount of task completed; accuracy of completed tasks
  - Partial interval: behavior occurred at least once during interval (5 min)
    - Smiled, laughed, hand flapped, greeted peer or adult
  - Time sampling: behavior was occurring at end of interval (3 min)
    - On task, in area, body rocking


Typical Assignments
Assignments with Integrated SIA
Frequency of Behavior
SIB
Directions Followed
30
25
20
15
10
5
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15


Unmatched Job
Job with SIA
# of 3min Intervals with Beh.
Self Stim
On Task Behavior
20
18
16
14
12
10
8
6
4
2
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

ADDITIONAL EVALUATION

- Support Personnel Feedback
  - Specialist, para, general educator needs
    - Materials, equipment, support training, guidance for data collection procedures
- Frequent re-assessment of interests, preferences
  - Indirect and/or direct preference assessment
  - SIAs may evolve, fluctuate
    - Especially if provided exposure to new experiences!
      - Changes in schools, broadened opportunities, new peers, new fads
- Quality of Experience: Fitness of environment/opportunity and SIA
  - Challenging behavior, personality conflicts
  - Limited opportunities (protective, fear, unsure)

EVALUATE EFFECTS

- SIAs are a means for understanding and capturing the attention of students with autism, which can aid in the development of academic, social, behavioral, and vocational interventions and supports.
- Professionals can implement interventions with empirical evidence while simultaneously building upon the unique talents and strengths of their students.
- The SIAs of students with autism should be shared to the benefit of others.

NEURODIVERSITY SUGGESTED READINGS

- *NeuroTribes: The Legacy of Autism and the Future of Neurodiversity*
  - by Steve Silberman.
- *The Power of Neurodiversity*
  - by Thomas Armstrong.
- *The Adolescent and the Adult Neuro-diversity* Handbook
  - by Sarah Hendrickx.
- *A Mind Apart* by
  - Susanne Antonetta.
- *The Man Who Mistook His Wife for a Hat and Other Clinical Tales*
  - by Oliver Sacks (essay).
- *Developing Talents: Careers for Individuals with Asperger Syndrome and High-Functioning Autism*
  - by Temple Grandin and Kate Duffy.

REFERENCES

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5®)*. American Psychiatric Pub.

Campbell, A. & Tincani, M. (2011). The power card strategy: Strength-based intervention to increase direction following of children with autism spectrum disorders. Journal of Positive Behavior Interventions, 13, 240-249. doi: 10.1177/1098300711400608

Cooper, J. O., Heron, T. E., & Heward W. L. (2006). *Applied Behavior Analysis* (2nd ed.). Upper Saddle River, New Jersey: Prentice Hall.

Jaarsma, P., & Welin, S. (2012). Autism as a natural human variation: Reflections on the claims of the neurodiversity movement. *Health Care Analysis*, *20*(1), 20-30.

REFERENCES CONTINUED

Winter-Messiers, M. A. (2007). From tarantulas to toilet brushes: Understanding the special interest areas of children and youth with Asperger Syndrome. *Remedial and Special Education*, *28*(3), 140-152

Winter-Messiers, M. A., Herr, C. M., Wood, C. E., Brooks, A. P., Gates, M. A. M., Houston, T. L., & Tingstad, K. I. (2007). How far can Brian ride the Daylight 4449 Express? A strength-based model of Asperger Syndrome based on special interest areas. *Focus on Autism and Other Developmental Disabilities*, *22*(2), 67-79.