# Preparing Autistic Students for the Future: Good Practices in Secondary Schools

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# 早上好

# 感谢您邀请我参加令人印象深刻的会议

#### Introduction and Disclosures

- Senior Research Scientists, FPG Child Development Institute, UNC-Chapel Hill
- Adjunct Professor, Department of Special Education, San Diego State University
- Background
  - Special education teacher
  - Program coordinator
  - University Professor
- Theoretical Orientation
  - Trained in applied behavior analysis but not BCBA
  - Technical eclectic

#### **Disclosures**

- Unfortunately: no royalties from products we have designed or drugs I have developed.
- Work funded by
  - Office of Special Education Programs
  - Institute of Education Sciences
    - RCT on high school comprehensive treatment model (CTM)
    - RCT on elementary school CTM
    - Both are school based and follow at technical eclectic conceptual
    - Development grant with paraprofessionals

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## Original CSESA Collaborators













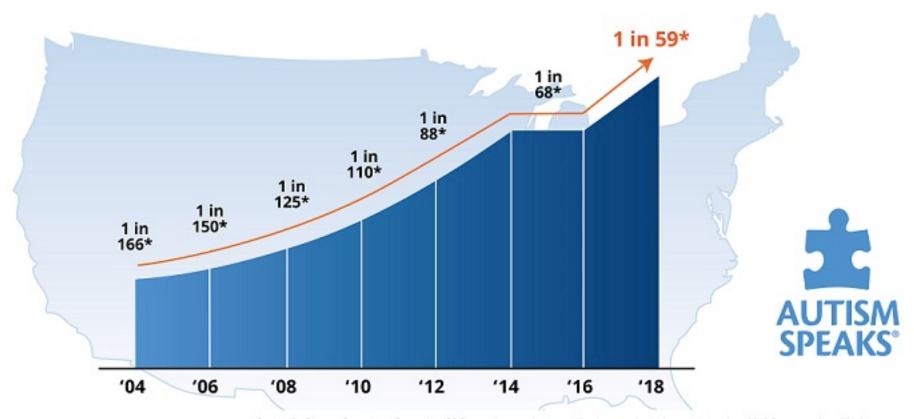


# Using a Common Language: What do we mean by Autism?

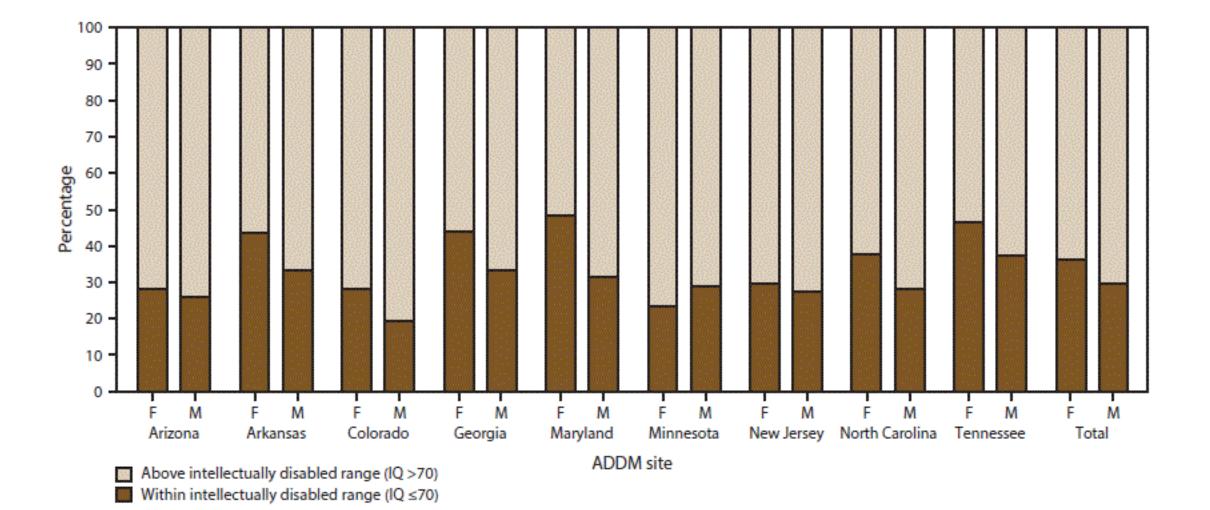
- DSM 5 -- Autism Spectrum Disorder and ICD-10—Autistic Disorder
  - Social communication
  - Restrictive and repetitive behavior
  - Onset before three years of age
- Mostly but not all boys (5:1)
- Associated difficulties
  - Social anxiety
  - Depression
  - Seizures



#### **Estimated Autism Prevalence 2018**



<sup>\*</sup> Centers for Disease Control and Prevention (CDC) prevalence estimates are for 4 years prior to the report date (e.g. 2018 figures are from 2014)



# What are the Goals that Individuals with Autism Identify?

# FOR YOUR SUBJECTS WHEN THEY GRADUATE: 1) SOMETHING TO DO 2) SOMEHNERE TO BE 3) someone to Love. GOOD LUCK!!

What are the Important Young Adult Outcome?

Health

Physical health

Mental health

Work or Post-secondary education

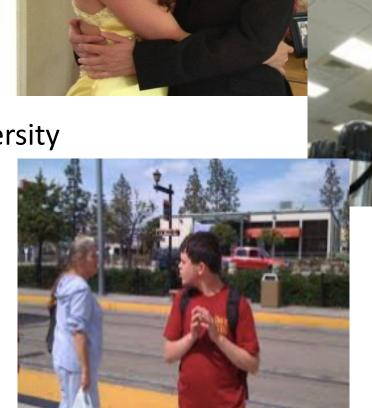
Employment

Attending community college or university

Community Integration

Community participation

Social relationships



# Health Outcomes for Young Adults with Autism (Odds Ratio)

	ASD vs. NonDD
Hypertension	2.03
Diabetes	2.78
Asthma	1.13
Psychiatric Diagnosis	2.78
Pediatrician Visits	12.03
Neurology Visits	6.90
Emergency Room Visits for Psychiatric Problems	9.58
Psychiatric Hospital	10.17

### **Employment Outcomes**

- One third of young adults with ASD are unemployed, and for those who are employed, they often fail to maintain employment or struggle with employment over time (Taylor, Henninger, & Malick, 2015)
- 50% were had no participation in employment in the two years after high school (Shattuck et al., 2012)
- 34% attended college (Shattuck, 2012)

### Community Integration Outcomes

- More likely to live at home after high school and less likely to live independently, in comparison to individuals from other disability groups (Anderson, Shattuck, Cooper, Roux, & Wagner, 2014)
- Relative to other students with IEPs, students with ASD
  - Had significantly more trouble completing activities of daily living,
  - Had a lower sense of self direction
  - Had fewer planned activities and social engagement with friends (Lipscomb, Haimson, Liu, Burghardt, Johnson, & Thurlow, 2017)

So, What Can We Do About These Outcomes?

# Are Schools the Best Hope for Children and Youth with ASD?

- A well-known US psychologist proposed that schools are the best hope
- Reasons
  - Children and youth with autism spend a good many days of their life in schools
  - Of those days, there are a substantial number of hours
  - Professional staff who are trained or could be trained to implement instructional and intervention programs
  - There are typically developing peers who can become a part of their instructional and social experience of schools
- The goal of public schools in the United States is to prepare for adulthood.

#### Think About the Time

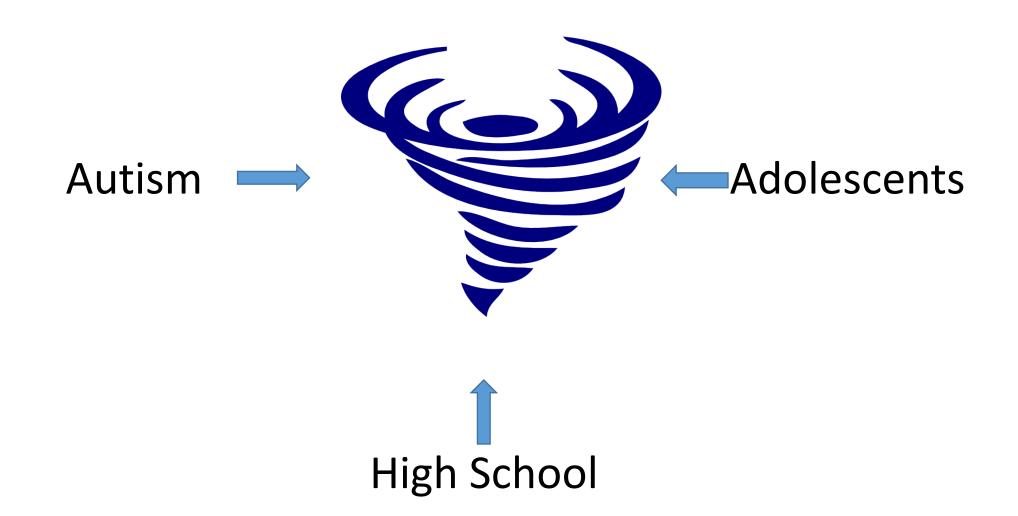
#### **Ages 3-22**

- 19 years
- 180 days in a school year
- 6 hours per day
- $6 \times 180 \times 19 = 20,520 \text{ Hours}$
- 6 x 180 x 19 x 60 = 1,231,200 minutes

#### **Ages 6-18**

- 12 years
- 180 days in a school year
- 6 hours per day
- 6 x 180 x 12 = 12,960 Hours
- 6 x 180 x 12 x 60 = 777,600 minutes

## Perfect Storm of Complexity



Read more »



Search

#### The Center on Secondary Education for Students with Autism Spectrum Disorders



The Center on Secondary Education for Students with Autism Spectrum Disorders (CSESA) is a research and development project funded by the U.S. Department of Education that focuses on developing, adapting, and studying a comprehensive school-based and community-based education program for high school students on the autism spectrum.

CSESA is a five year project that brings together experts in autism, secondary education, adolescence, and implementation to work in collaboration with high schools, families, adolescents with ASD, and community members.

#### **NEWS & EVENTS**

Autism Society 2013 Pre-Conference Session, July 10, 2013

See all news & events







http://csesa.fpg.unc.edu/

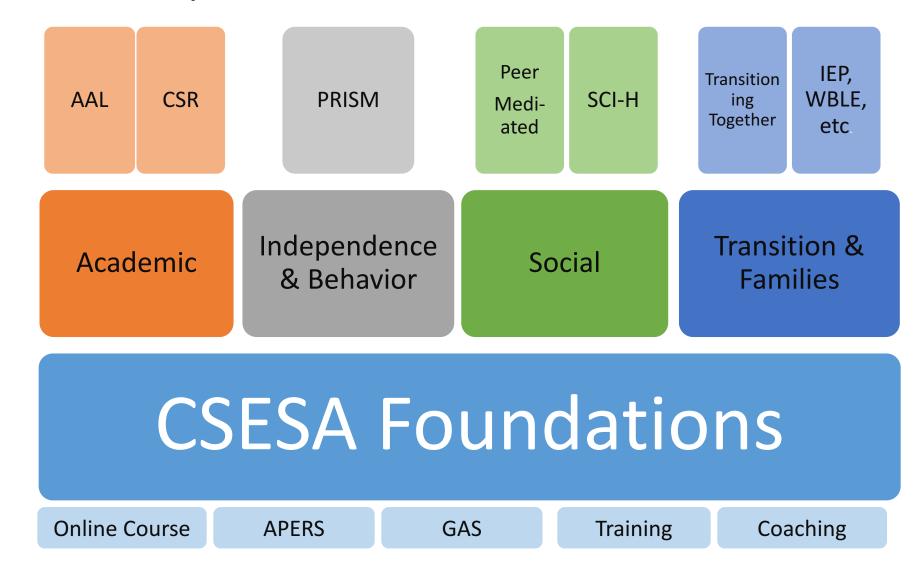




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### **CSESA Components**



#### **CSESA Foundations**

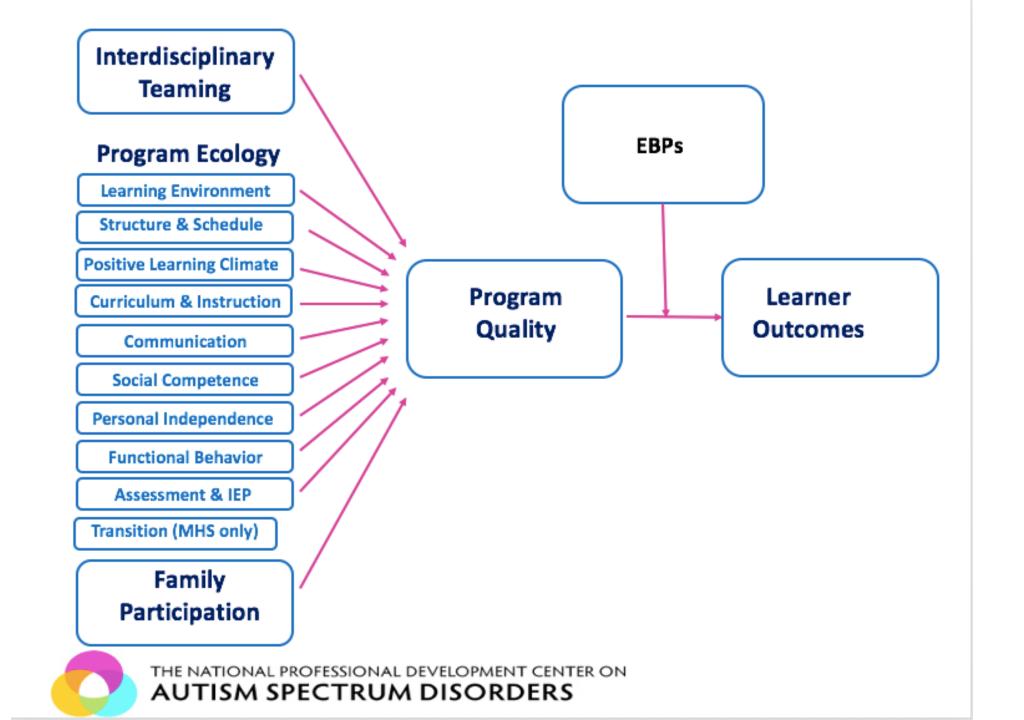
- Gaining acceptance from the school system
  - Role of implementation science
- Forming a team
- Assessing and improving quality

# Essential Foundational Feature: Forming and A-Team

- Special Education Teacher
- General EducationTeacher
- Speech Pathologist
- School Psychologist
- Administrator (Principal, Assistant Principal)



# Autism Program Environment Rating Scale APERS



## Academic

Alternative Achievement Literacy (AAL)
Collaborative Strategic Reading-High School
(CSR-HS)

## Overview of Literacy Component

Target Areas

Comprehension

Strategies

- Alternative Achievement Literacy: prompting, visuals, adaptation of text, systematic instruction
- Collaborative Strategic Reading: Before, during, after with visuals, graphic organizer, self-monitoring checklist, and peer pairing

Implementation

- AAL: Daily
- CSR-HS: 30 minute sessions 2 to 3 times per week



## Academic Component: Literacy

# Alternate Achievement Literacy

(for students receiving alternate assessments)

- Access/comprehend text that is chronologically age appropriate by using adaptations, modifications, and technology
- Comprehend passages of connected text
- Apply comprehension across
   both narrative and informational text



### Implementation Snapshot: AAL





Chapters 7-8

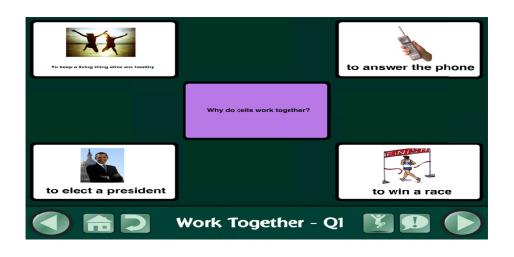












### Implementation Snapshot: AAL

#### Chapter 5

#### On Friday I met Karen

after school so she could draw my hands<sub>1,2</sub>



When she was done she showed me her drawing.

#### **Prompts for Passage Reread**

- 1) Read 3 sentences of text containing the answer.
- If incorrect response, move to next prompt.
- If no response cue student to help card and move to next prompt.
- 2) Read 1 sentence of text containing the answer.
- 3) Read and point to the answer.
- 4) Point to answer on response board and state answer.



## Academic Component: Literacy

# Collaborative Strategic Reading — High School

- Consists of EBPs to enhance reading comprehension
- Uses a peer-to-peer model
- Includes before-during-after reading strategies and elements of cooperative learning
- Manualized intervention that should be implemented 2 to 3 times per week for a minimum of 16 weeks.



Developed by Sharon Vaughan and colleagues at the University of Texas, Austin

#### Implementation Snapshot: CSR-HS

#### **CSR-HS STRATEGIES GUIDE**

#### Rationale

Develop skills for enhancing comprehension of informational text by using strategies before, during, and after reading

#### Standards

- Know and use various text features to locate key facts or information in a text.
- Ask and answer questions about key details in a text.
- Identify the main topic and retell key details of a text.
- Ask and answer questions to determine or clarify the meaning of words and phrases in a text.

#### Preparation

Before introducing any Collaborative Strategic Reading – High School (CSR-HS) lesson, establish pairs and set expectations:

- Pair students with heterogeneous skills and abilities.
- · Establish expectations for paired work, so that all

students contribute and work cooperatively with one another; set expectations for reading; and set expectations for student engagement.

 Invite students to contribute examples and nonexamples of expected behavior during CSR–HS work groups.

#### Student Materials

- One per student:
- · Text with key words
- Learning log
- Writing utensil
- ...............................
- One per pair:
- Checklist with discussion prompts
- CSR–HS graphic
- Ouestion stems

#### Teacher Materials

- Lesson plan
- Illustration
- Timor
- · Learning log evaluation rubric

#### Teacher Introduction

2 to 3 minutes

The following activities are recommended during this phase:

- Have materials ready and organized.
- Ensure pairs are in place and prepared for CSR-HS.
- · Communicate expectations by providing clear, explicit indications of goals for assignments and activities.
- · Provide explicit instruction for the assignment and activities.

#### **Before Reading**

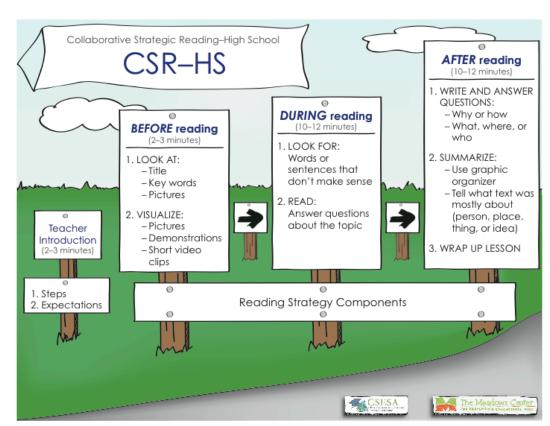
2 to 3 minutes

To prepare students for reading, the following activities are recommended:

- · Introduce the topic.
- Preteach key words and/or proper nouns.
- Build background knowledge or connect to students' prior knowledge (e.g., through pictures, videos, demonstrations).
- Set the purpose for reading.
- · Have students write key words in their learning logs.

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# Independence and Behavior

PRISM (Promoting Responsibility, Independence, and Self-Management)



#### Overview of PRISM

**Target Areas** 

- Variety of behaviors related to independence and adaptive behavior
- Responsibility and Independence; Community Engagement;
   Self-Management

Strategies

- Evidence-based practices from NPDC
- E.g., Visual supports, self-management, task analysis, peer-mediated interventions

Implementation

- Process of assessment, planning, implementation and evaluation with team
- 30 minutes per week of work with student, embedded in instruction





# Implementation Snapshot: Student Assessment Secondary School Success Checklist

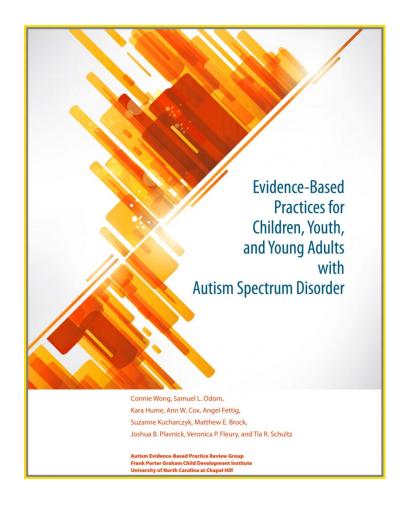
Domai	n: Personal Responsibility & Independence (1 of 3) Enter later								·	
-SUBDO	OMAIN: ORGANIZATION (1 OF 3)									
Enter later   Click here if you need to review the Checklist Guidelines.										
		Skill Evaluation					Pric	Priority Ranking		
		Not like student	Like student	Much like student	N/O	N/A	No concern	Some concern	Major concern	
01.	Accesses and follows daily schedule  Note: Format & length may vary based on student needs (e.g. written, objects, pictures, ipad); student refers to it throughout day	Co	01	O 2	°3	c <sub>4</sub>	<b>6</b> 0	01	<b>6</b> 2	
02.	Uses tools to document assigned work and/or scheduling information  Note: Format may vary (e.g planner, calendar, technology, putting information in backpack)	Co	01	02	С3	04	0.0	0.1	02	
О3.	Uses organizational system to document work completion Note: Format may vary (e.g. work system, planner, checklist, system to track grades, syllabus)	Co	01	02	Оз	04	60	01	<b>6</b> <sub>2</sub>	
04.	Brings appropriate materials to assigned location  Note: Includes bringing home and turning in homework, bringing supplies to class	C <sub>0</sub>	01	02	°3	04	0.0	01	<b>0</b> 2	
05.	Materials/work space are organized Note: Includes neat paperwork, tidy work space	0	01	02	03	04	<b>n</b> o	01	<b>6</b> 2	
O6.	Identifies steps required to complete assigned activities*  Note: Includes breaking down larger projects into smaller steps, sequencing steps, listing steps in organizational systems	Co	C <sub>1</sub>	02	С3	04	0.0	0.1	<b>0</b> 2	
07.	Begins assigned activities within allotted time*	ಂ	01	O 2	03	°4	0 0	01	<b>0</b> 2	
08.	Completes assigned activities within allotted time*	Co	C <sub>1</sub>	02	03	04	00	01	02	
09.	Returns materials to correct location at the end of activities	ಂ	01	02	03	°4	00	01	<b>6</b> 2	
010.	Arrives at assigned location or activity on time  Note: May include within electron or across school/community	Co	C <sub>1</sub>	02	Оз	°4	00	01	02	



#### Evidence-Based Practices

- Wong et al. 2014 recently updated Odom et al. (2010) EBP review <a href="http://autismpdc.fpg.unc.edu/sit">http://autismpdc.fpg.unc.edu/sit</a> es/autismpdc.fpg.unc.edu/files/2
- Began with pool of 29,105+ articles and reduced to 456
- 27 EBPs identified

014-EBP-Report.pdf



## **Evidence – Based Practices (2014)**

**Antecedent-based interventions** 

**Cognitive behavioral intervention** 

**Differential reinforcement** 

Discrete trial training

**Exercise** 

**Extinction** 

**Functional behavior assessment** 

**Functional communication training** 

Modeling

**Naturalistic interventions** 

**Parent-implemented intervention** 

**Peer-mediated instruction/intervention** 

Picture Exchange Communication System<sup>TM</sup>

**Pivotal response training** 

**Prompting** 

Reinforcement

**Response interruption/redirection** 

**Scripting** 

**Self-management** 

**Social narratives** 

Social skills training

**Structured play groups** 

Task analysis

Technology-aided

intervention/instruction

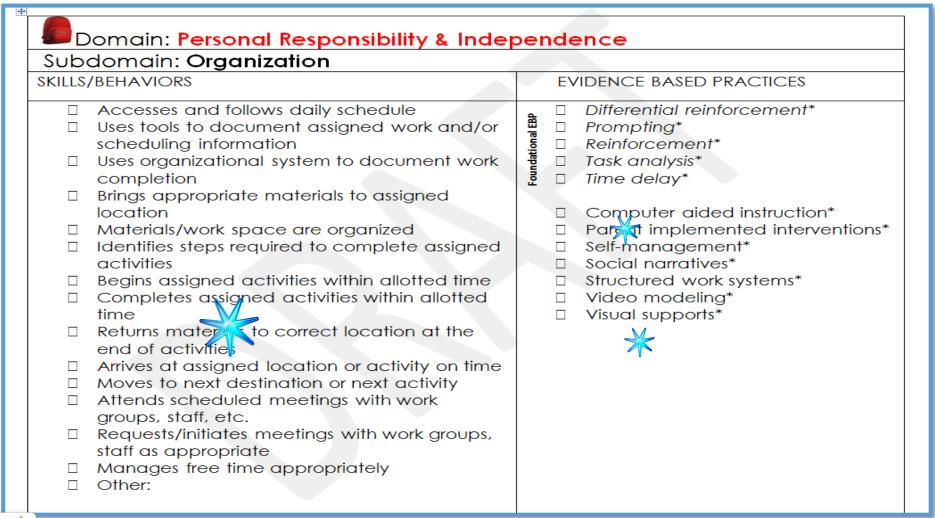
Time delay

Video modeling

**Visual supports** 



## Implementation Snapshot: Planning Linking Goals to Evidence-Based Practices

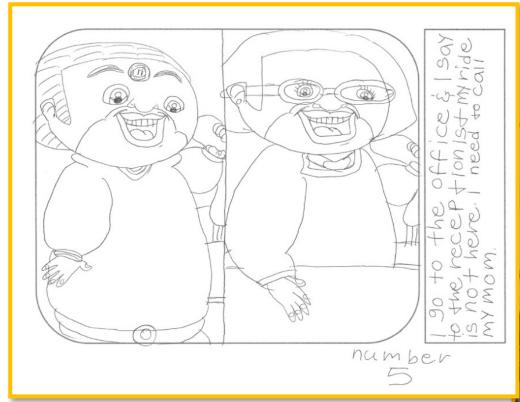




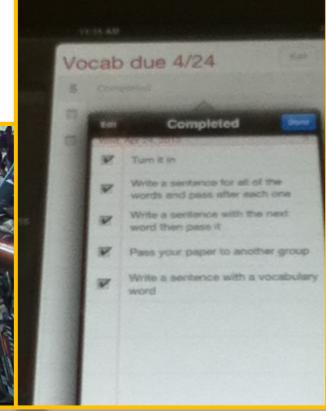
# Implementation: Student (Independence & Behavior)



 <u>Evidence-Based Practices:</u> Embedded EBPs in ongoing educational instruction to increase independence and improve behavior







## Implementation Snapshot: Implementing Linking Goals to Evidence-Based Practices

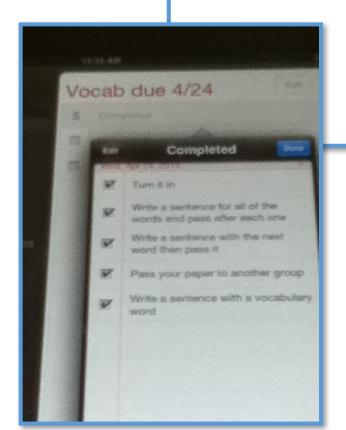
### Implementation:

- Met in Academic Strategies class to teach task analysis
- Used visual supports to teach concept, along with prompting, reinforcement
  - Used technology (iTouch & iPad)
- Moved into English II class

### Let's Practice

- What are the steps to making a call on your phone?
  - Tell me the steps
    - I will write them down
    - I will try them out







# PEER AND SOCIAL COMPONENT

**Peer Supports** 

Peer Networks

Social Competence Intervention (SCI-H)



# Overview of Peer Supports and Peer Networks

#### Target Areas

- Students with intellectual disability and/or autism
- Accessing statewide **OR** alternate assessments

### Strategies

- Facilitator (i.e., paraprofessional, educator, counselor) receives training on recruiting/training students and facilitating support
- One or more peers learn how to converse with, provide support to, and/or collaborate with a student with disability
- Peer supports happen **inside** the inclusive classroom
- Peer networks happen **outside** of the classroom

### Implementation

- Process of recruiting, planning, implementation, supporting, and evaluating with team
- Students sit together each class period (peer supports) or social activity (peer networks), and peers provide academic and/or social support throughout their time together



 Peer-Mediated approaches: In class (peer supports) and out of class (peer networks) peer-mediated supports







Social Competence Intervention –
 High School: Curriculum to improve advanced social competence skills in students accessing the statewide assessments

# Overview of Social Competence Intervention (SCI-H)

### Target Areas

- High school students with high-functioning ASD or similar social challenges
- Full Scale IQ of at least 75

## Strategies

• Assists students in understanding how to (a) adapt to changing social environments, (b) recognize thoughts/feelings of others, (c) positively influence interactions through their own behavior, and (d) access problem solving strategies to develop relationships with others

## Implementation

- 45 min; at least twice per week
- Implemented by 1 or more facilitators
- Incorporates specific behavior management and token systems

## Transition and Family

- Transition Strategies
  - Self directed IEP
  - Community resource mapping
  - Work-based learning
- Transitioning Together

## Overview of Transition and Family

## Target Areas

- Teachers: Community and school mapping, improved transition planning, IEP writing
- Students: Involvement in IEP, participation in transition planning, workbased learning experiences, portfolio building, social groups during parent meetings
- Parents: Involvement in parent group and learning about the transition out of HS

## Strategies

- Community and school mapping
- Indicator 13 quality rubric
- Curriculum to involve students in their own IEP
- Work based learning experiences
- Transitioning Together parent and teen 8 week intervention groups

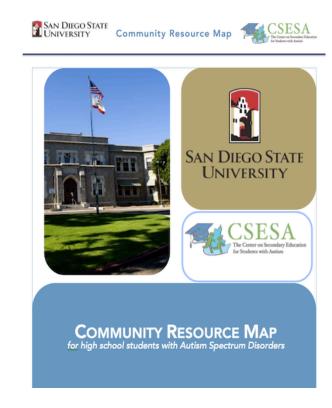
## Implementation

- School teams map local resources, improve transition IEP writing
- Students participate in curriculum on IEP participation and work based learning activities
- Parents and students attend Transitioning Together groups



## Transition & Families Component

- Community and School Resource Mapping
- Transition Planning Process
- Student Involvement in the IEP
- Work Based Learning
   Experiences in preparation for postsecondary goals (college, careers, independent living)



## Implementation Snapshot

• IEP participation example Animoto:

**Christopher's story** 

## Implementation Snapshot

Work-based learning example

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			Minter Break	2	3	4
5	6 Habitat Restore	7 Classroom Central	8 Raptor Center	9 Reading Partnership with Metro 9:30 – 11:30	10 Lake Equestrian Center	11
12	13 Seeses-45 period	14 Exerce-36 period	15 Sesses 2A period Sesses for our Exam	16 Exams 3L-aadod- Latta Equestrian Center for Exam	17 Exams (Make ups)	18
19	20 Holiday	21 Workday	22 Sow Much Good	23 Reading Partnership with Metro 9:30 – 11:30	24 The Laurel's Assisted Living and Retirement Home	25
26	27 Habitat Restone	28 Classroom Central	29 Raptor Center	30 Tour Johnson and Wales OR EMT/Medio/Fire and K9 Officer OR work on Cooksie Boards TBD	31 Lasta Equestrian Center	Notes: K9 Officer Johnson & Wales CPCC March 20

Today's Site: Habitat Restore					
☐ Wash windows					
Get rags from kitchen					
Get Windex from cupboard in kitchen					
Clean all the front windows					
☐ Wash front doors					
o Use rags					
Use Windex from cupboard in kitchen					
<ul> <li>Clean with two front doors at the front of the store</li> </ul>					
☐ Check with Supervisor					



## Transition & Families Component

## Transitioning Together (family component)

- Provide education and support for parents during the period of transition
- Emphasize positivity and problem solving
- Share relevant resources and referrals based on results of school and community mapping
- Individual family "joining session", 8 multi-family weekly group sessions, and 8 sessions for teens.



## Transitioning Together

- The program provides information and support sessions for parents, and a social group for teens.
- Eight-week education and support program for families of high school students with ASD.
- Group-based, psychoeducational interventions
- Specific objectives include (1) reducing stress for families, (2) improving family coping strategies, and (3) supporting youth transitioning out of high school.

# Implementation Snapshot Transitioning Together

#### TIPS FOR HANDLING STRESS

#### Have Fun!

- Use humor
- · Date night
- Fireworks
- Bouncy balls
- Hit the easy button on someone's desk
- Summer camp
- Video games (calm soothing environment)

#### Take Time to Stop and Think

- Plan an imaginary revenge fantasy
- · Sit and mentally process
- · Focus on the task at hand
- Listen to music
- Take a bath
- · Quietly fidget
- Create some distance--remove yourself from the stressful situation so you can think about
- Talk to someone about your stress

#### Let Go

- Reprioritize (and let go)
- · Learn to "let go and let God"
- Learn to realize you can't change everything
- Deal with and accept life as it is

#### Do Things You Like

- Take a walk
- · Go for a drive
- Exercise
- Go fishing
- Cook
- Clean
- Have a drink
- Read a book
- Go golfing





## Feedback from Parents

Do we have to quit meeting?

We will be doing things differently based on our experience in the group, especially working on the self help skills we never really gave him the opportunity to develop.

I enjoyed problem solving. Sometimes it's easy to forget the obvious solutions.

Our attitude changed. We didn't think our son could do a job and go to school-and he can do both.

## How to Move this into Implementation

- A-Team determine the order in which components will be implemented
- Coach works with A-Team and school staff to provide onsite training
- Coaches visit school one day a week

# Coaching Components

## Preobservation Conference

Select coaching target, obs plan, data collection plan

## Postobservation Conference

Discuss obs, discuss ways to change behavior, plan for ongoing support

3 Components
Of Cyclical
Coaching
Process

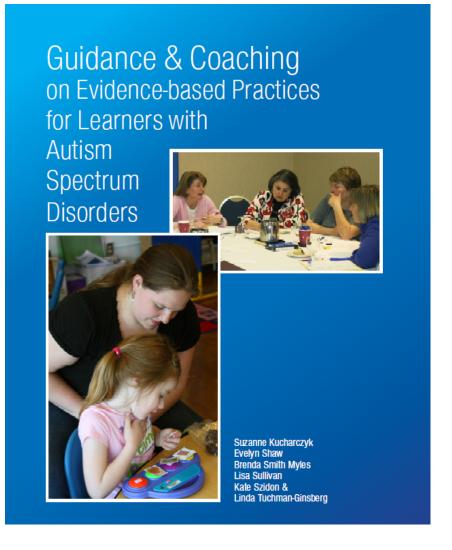
#### **Observation**

Collect data for meaningful discussion and planning

**Feedback & Support from NPDC** 

### Coaching Is an Essential Feature of Implementation

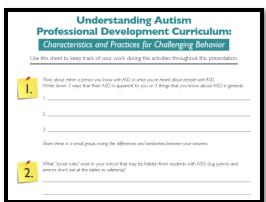
- A minimum of one day per week on site or remotely
- Rapport and relationship
  - Mutual respect
  - Agreed upon goals
- Time
- Tools
  - EBP or other practices
  - Fidelity checklists
- Feedback
- Planning



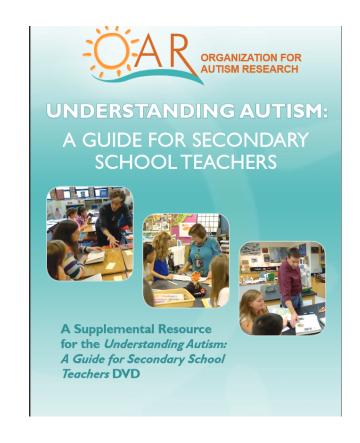
## **CSESA** Resources

- Brand NEW Professional Development Series
  - 2 presentations with video, facilitator notes, activities, and handouts
  - Designed for middle & High general educators





Understanding Autism Guide



## CSESA Resources: Autism-at-a-Glance Series

- Anxiety
- Communication
  - Verbal
  - Functional
- Depression
- Exercise
- Health Eating
- Hygiene
- Internet Safety
- Puberty
- Relationships and Dating
- Sleep



#### Feb 2014

Autism at-a-Glance is a publication of the Center on Secondary Education for Students with ASD (CSESA)



#### Supporting Communication in High School

This issue of Autism at-a-Glance focuses on understanding and improving the communication skills of adolescents on the autism spectrum. The content specifically targets the needs of students who are able to communicate conversationally. Examples are provided in the context of academic courses and teacher and per relationships.

If you serve students with more significant oommunication needs, please see our Autism st-a-Glance titled Supporting Functional Communication in High School.

Autism at-a-Clance is designed for high school staff members supporting students on the autism spectrum, as well as family members of adolescents on the autism spectrum.

Autism at-a-Glance provides a current summary of topics relevant to high school students on the autism spectrum as well as practical tips and resources for school and community personnal and family members.

tudents on the autism spectrum exhibit characteristic difficulties associated with communication. Deficits appear in three main areas: comprehension, expressive communication, and interacting with others.

#### Comprehension

Understanding verbal and non-verbal communication

#### Potential Areas of Difficulty Related to Comprehension

- Speed of processing language. Students may process comments, questions, and directions more slowly than would be expected for their academic or cognitive abilities or age.
- Non-literal language. Students may struggle to understand sarcasm, hyperbole, figures of speech, or other forms of non-literal language.
- Inferences. Students may have difficulty reading between the lines or making assumptions about information that is not directly presented.
- Vocabulary. Students may have difficulty generalizing vocabulary words outside of the specific contexts in which they were learned.
- Point-of-view. Students often struggle to understand points of view other than their own, which can inhibit their understanding of oral and written language.

#### What This Might Look Like in the Classroom

- Mr. Van Rynbeck tells the students to put their pencils down and pass their papers forward, but Darnell takes 10 seconds to put his pencil down, and does not pass his paper forward until he gets another prompt.
- A peer says "thanks for letting me know" after Garrett rudely corrects her, and Garrett responds with a very sincere "you're welcome," not understanding the sarcastic tone.
- The short story mentioned "an emotionally draining year" and a character's "first birthday dinner without his mom," but Monique could not figure out that the character's mom had died.

## https://csesa.fpg.unc.edu



February 2016

Autism at-a-Glance is a publication of the Center on Secondary Education for Students with ASD (CSESA)



#### **Internet Safety for Teens with ASD**

Autism at-a-Glance is a series of practitioner and family-friendly documents created by the Center on Secondary Education for Students with ASD (CSESA) designed for high school staff members supporting students on the autism spectrum, as well as family members of adolescents with ASD. The purpose of the Autism at-a-Glance series is to provide a current summary of topics relevant to high school students with ASD as well as practical tips and

This Autism at-a-Glance was designed to support high school staff and family members in supporting spectrum as they begin to explore the internet.

resources for school and

community personnel and

family members.

e live in a digital world where communication via the internet is the norm. Friends are made and maintained virtually on sites like Facebook, Twitter, Instagram, and Snapchat. Social media may be an accessible venue for adolescents with autism spectrum disorder (ASD) to build and maintain social relationships, as well as learn new things and explore their interests. While there are many benefits to using the internet, there are also risks and with easy access to the internet, teens with ASD must learn about these risks and how to protect themselves.

#### What are the risks?

#### **Fixation on Games or Social Networking Sites**

Teens with ASD are vulnerable to becoming compulsive internet users. They may struggle to shift from a fantasy gaming world to day to day activities. Compulsive internet use also limits in-person interactions which reduces opportunities to practice and learn social communication skills. Here are ideas related to limiting obsessive technology use:

- . Set clear limits on internet use and use a timer for the teen to indicate when use is finished. Software timers can also be used to limit access to certain websites to specific hours
- . Encourage technology or computer use in the same room as an adult



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Autism at-a-Glance is a publication of the Center on Secondary Education for Students with ASD (CSESA)



#### **Anxiety in Adolescents with ASD**

Autism at-a-Glance is a series of practitioner and family-friendly documents created by the Center on Secondary Education for Students with ASD (CSESA) designed for high school staff members supporting students on the autism spectrum, as well as family members of adolescents with ASD. The purpose of the Autism at-a-Glance series is to provide a current summary of topics relevant to high school students with ASD as well as practical tips and resources for school and community personnel and family members.

This Autism at-a-Glance was designed to support high school staff and family members in understanding and recognizing symptom of anxiety, and how those symptoms may present in adolescents on the autism spectrum.

nxiety is believed to be one of the most common co-occuring disorders for individuals with Autism Spectrum Disorder (ASD) along with depression and attention deficit disorder (ADHD), A conservative estimate of the rate of anxiety in teens with ASD is at least 40% but some studies have put that rate almost twice as high. As a comparison, the rate of anxiety in teens in the general population is around 8%. Anxiety is thought to be more prevalent during adolescence as teens with ASD become more aware of their differences from their peers. This is particularly true for teens without an intellectual disability. Because anxiety is so common in teens with ASD, it is important that parents, teachers, and health care professionals be on the lookout for signs that an adolescent may be trying to cope with anxiety.

#### What is Anxiety?

Anxiety is the presence of excessive worry or fear and can vary from mild to severe. It can be characterized as generalized anxiety disorder or more specifically as social anxiety, separation anxiety, obsessive compulsive disorder, or specific phobias (for example, of spiders or loud noises). Social anxiety is perhaps most common in individuals with ASD. Social anxiety is described as fear and avoidance of new people and social situations due to feelings of concern about being viewed negatively by others.

In school, anxiety can impact a student's academic performance and lead to behavior problems. At home it can disrupt family life. If untreated, anxiety can lead to depression.



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#### **Exercise for Adolescents with ASD**

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This Autism at-a-Glance was designed to support high school staff and family members in understanding exercise for adolescents of the autism spectrum.

xercise can be an effective way to promote positive behaviors in adolescents with Autism Spectrum Disorder (ASD). Research has demonstrated that an increase in physical exertion can lead to improvements for adolescents with ASD in four areas:

- Behavior (decreasing or eliminating behaviors that interfere with the
- School Readiness (performance during an academic task)
- Academic Engagement (active participation in academic tasks)
- · Motor skills (movement or motion, including both fine and gross motor skills, and sensory functioning)

#### Why is exercise especially important for those with

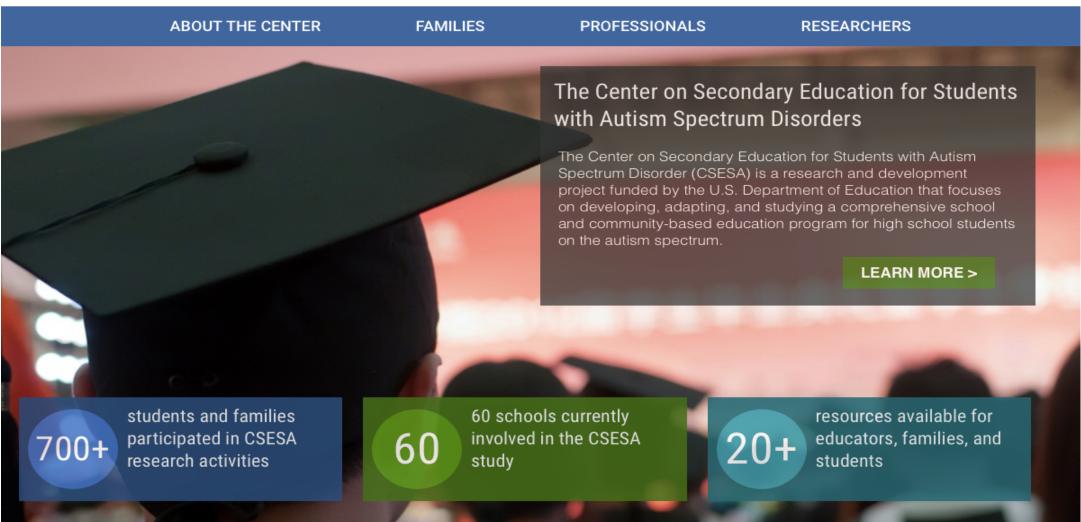
- · More than half of adolescents with ASD are either overweight or at risk of being overweight, which is higher than the national average, perhaps due to physical inactivity or unusual dietary patterns.
- Being overweight can increase risks associated with ASD such as depression, anxiety, gastrointestinal problems as well as a whole host of other health problems.
- Adolescents with ASD have been found to be at a higher risk for bone fractures and have a lower bone density than their peers, at least in part due to a lack of sufficient exercise



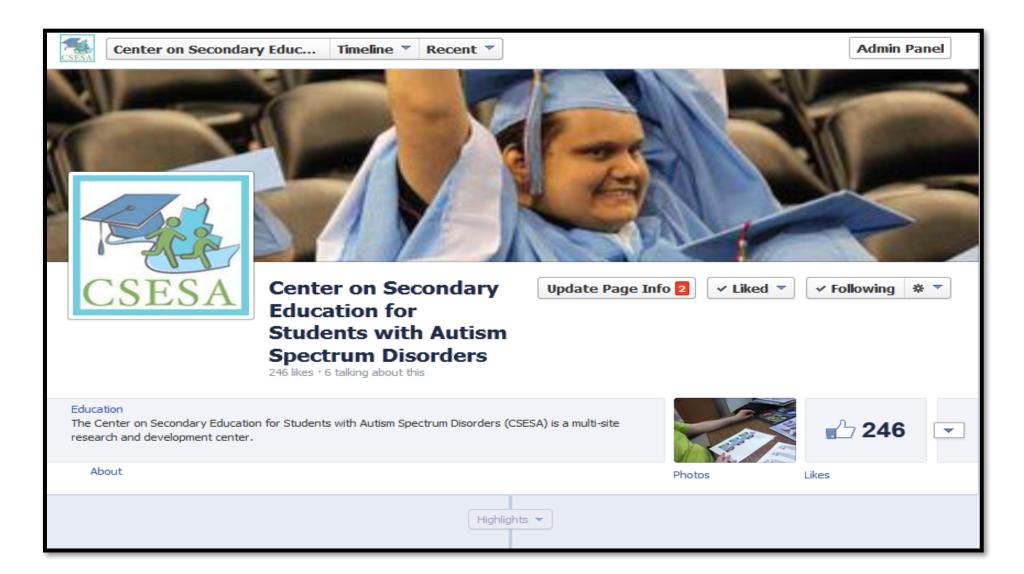
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## 非常感谢你

