

Supporting Students with Autism Spectrum Disorders Through School-Wide Positive Behavior Interventions and Supports

Introduction

Students diagnosed with Autism Spectrum Disorder (ASD) present with complex profiles of strengths and needs, which may require intensive supports and interventions. To provide students with access to non-disabled peers and the general education curriculum, schools are responsible for supporting students with disabilities, including those identified with ASD, within the “Least Restrictive Environment” (LRE). Students with disabilities benefit from positive behavioral interventions and supports (PBIS; Meyer et al., 2021). The use of schoolwide and classwide PBIS shows promise in helping educators to integrate evidence-based practices for the benefit of *all* students, including those diagnosed with ASD. The purpose of this brief is to provide educators with a quick and easy resource for identifying effective practices for supporting all students, especially those diagnosed with ASD within general education contexts.

Increase in ASD Identification

According to the Center for Disease Control (CDC, 2021), from 2000 to 2016, the prevalence of children diagnosed with ASD has grown from roughly 1 child diagnosed with autism for every 150 children to about 1 child diagnosed with autism for every 44 children. Symptoms include (a) persistent impairments in social communication and social interaction skills and (b) restricted and repetitive displays of behavior and interests (American Psychiatric Association, 2013). ASD is one of the disability categories under the Individuals with Disabilities Education Improvement Act (IDEA, 2012). Symptoms of ASD can significantly affect educational progress and participation of these students in the general education environment. The number of students identified as having educational disabilities has remained fairly consistent over the past decade, however a more significant proportion of students are being found eligible for IDEA services for an educational diagnosis of ASD (Morningstar et al., 2017). Per IDEA (2004), schools must educate students with ASD within the Least Restrictive Environment (LRE). The U.S. appears to be progressively meeting this mandate for ASD students. Currently, 58% of students with ASD are partially included in general education classrooms (National Center for Educational Statistics, 2020; Morningstar et al., 2017). For teachers in both general education and more specialized learning environments, this mandate has increased the need for teachers to have the skills and strategies to educate this diverse population within school and classroom contexts.

The National Autism Center (NAC) and the National Clearinghouse on Autism Evidence and Practice (NCAEP) have provided guiding documents summarizing the latest research on evidence-based practices for supporting students diagnosed with ASD. The next section of this practice brief organizes the practices identified in the two guides using five critical PBIS practice areas (e.g., Simonsen and Myers, 2015) as overarching themes. Each practice is paired with a brief description defining the practice as well as a brief general statement of situations when teachers may find the particular strategy helpful. In the last column are resources available to the reader to further his/her/their understanding of the concept, including video clips and websites.

Strategies for Defining and Teaching Expected Behavior

Strategy	Description	This is helpful when...	Resources
Task Analysis	Task analysis is a strategy where a skill is broken down into smaller steps, which can be taught separately and consistently.	a student or a group of students struggle(s) to complete a multi-step task, like tying shoelaces or solving a long division math problem.	<ul style="list-style-type: none"> • Module on Task Analysisⁱ • Applied Behavior Analysis: The Role of Task Analysis and Chainingⁱⁱ • Chaining and Task Analysis: An Autism Teaching Strategies Videoⁱⁱⁱ • Task Analysis in Applied Behavior Analysis (ABA) Therapy: Strategies and Examples^{iv}
Social Skill Instruction	Social skill training or instruction is when a learner is explicitly taught how to interact with others appropriately within a context. Ideally, this includes the provision of examples and non-examples, modeling of the target behavior(s), as well as many opportunities for practice, feedback, and acknowledgment (Simonsen & Myers, 2015, pp. 61-62).	setting the behavioral tone for the school year and/or teaching specific skills that seem to be lagging (e.g. how to resolve conflicts).	<ul style="list-style-type: none"> • Module on Social Skills Training^v • Social Skills Interventions: Getting to the Core of Autism^{vi}
Direct Instruction	Direct instruction is a systematic instructional approach that includes scripted lessons for explicit teaching; repetition of	students need a highly structured, data-based approach to make academic gains	<ul style="list-style-type: none"> • Video Introducing Direct Instruction^{vii} • Direct Instruction^{viii} • Five Meanings of Direct Instruction^{ix}



	content; frequent opportunities for student responding, feedback from teachers in the form of reinforcement or error corrections; and assessment of mastery before advancing to more complex concepts or skills.		
Teaching Lessons in Natural Context	Teaching lessons in the natural context is a strategy used in which the educator uses authentic settings (such as the classroom, playground, or cafeteria) and events as opportunities for learning and practicing skills.	students have difficulty recalling information and/or struggle to apply concepts outside of the classroom.	<ul style="list-style-type: none"> • Module on Naturalistic Intervention^x • JASPER (Joint Attention, Symbolic Play, Engagement, & Regulation)^{xi}
Modeling	Modeling is the correct demonstration of desired skills, which serve as an ideal example to be imitated by the learner.	students have difficulty learning and applying new skills through written or spoken instructions.	<ul style="list-style-type: none"> • Module on Modeling Modeling-Autism/Moderate and Severe Disabilities^{xii}
Prompting	Prompts are forms of assistance or reminders (e.g., visual, physical, vocal) that encourage a learner to engage in the desired behavior. The goal is to fade prompts, so the learner performs the skills without needing the added support.	students have difficulty completing tasks or following expectations independently.	<ul style="list-style-type: none"> • Module on Prompting^{xiii} • Autism Q and A: Using Prompts to Promote Skill Acquisition^{xiv} • EBP: Prompting^{xv}
Time Delay	Time delay is a strategy that includes the delivery of an instruction followed by prescribed wait-time for the student to engage in the desired behavior before any other prompt, assistance, or feedback is given. This strategy is done to provide the learner with the opportunity to respond independently.	students seem to be dependent on teacher guidance and modeling to complete tasks.	<ul style="list-style-type: none"> • Module on Time Delay^{xvi} • Supporting and Responding to Students' Social, Emotional, and Behavioral Needs^{xvii} • Evidence-Based Practice (EBP) High School Case Study: Time Delay^{xviii}



Strategies for Arranging the Classroom

Strategy	Description	This is helpful when...	Resources
Antecedent Based Interventions	Antecedent interventions consist of arranging the learning environment, events, or circumstances to facilitate desired behaviors and to minimize the likelihood of problem behaviors.	trying to reduce distractions and undesirable behaviors within the classroom.	<ul style="list-style-type: none">• Module on Antecedent-Based Intervention^{xxix}
Visual Prompts	Visual prompts provide the learner with a visible model of what to do, eliminating the need for educator-mediated assistance.	trying to increase students' abilities to learn and complete tasks independently.	<ul style="list-style-type: none">• Module on Visual Supports^{xxx}• Visual Supports for School, Home, & Community^{xxxi}• Visual Supports: Helping Your Child Understand and Communicate^{xxxii}• Visual Tools^{xxxiii}
Schedules	Schedules are visual displays using photos, pictures, or text which a learner can use to track and follow along with activities the learner needs to complete within a designated time frame. The schedule may provide an overview of an entire day or guide what activities the learner should perform within a smaller time frame (e.g., games during free-play or self-care routines for night-time).	trying to increase students' abilities to complete tasks on their own within a reasonable timeframe.	<ul style="list-style-type: none">• Module on Visual Supports^{xxxiv}• Visual Schedules^{xxxv}
Behavioral Momentum	Behavioral momentum is a strategy through which learners are presented with easier or more preferred tasks before presenting more challenging tasks. The learner is more likely to attempt the more	students have a difficult time complying with requests or starting classwork.	<ul style="list-style-type: none">• Demonstration of Behavioral Momentum^{xxxvi}• Behavioral Momentum^{xxxvii}• Supporting and Responding to Students' Social, Emotional, and Behavioral Needs^{xxxviii}



	challenging tasks through the success and reinforcement of completing less difficult (and more desirable) tasks.		<ul style="list-style-type: none"> • Using Behavioral Momentum to Increase Motivation^{xxxix}
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Strategies for Monitoring and Acknowledging Students

Strategy	Description	This is helpful when...	Resources
Reinforce-ment	Reinforcement is a strategy in which the educator purposely arranges what occurs after behavior to increase the likelihood of that behavior happening again.	trying to increase time on task and improve morale within the classroom.	<ul style="list-style-type: none"> • Module on Reinforce-ment^{xxx} • Reinforcement in the Classroom^{xxxi} • Supporting and Responding to Students' Social, Emotional, and Behavioral Needs: Evidence-Based Classroom Strategies for Teachers^{xxxii}
Differential Reinforce-ment	Differential reinforcement is a strategy used to promote desirable or appropriate behavior while decreasing less desirable behavior. A learner may be provided with reinforcement for exhibiting: (a) behavior that is incompatible with the undesirable behavior, (b) behavior that is a reasonable alternative to the undesirable behavior, (c) other, more desirable behaviors for predetermined amounts of time, or (d) low rates of the undesirable behavior.	trying to reduce situationally inappropriate behaviors (e.g. calling out, work refusal, aggression).	<ul style="list-style-type: none"> • Module on Differential Reinforcement^{xxxiii} • Differential Reinforcement^{xxxiv}
Self-Management	Self-management is a strategy designed to increase a learner's oversight over his or her behavior.	students struggle to manage their own behaviors independently.	<ul style="list-style-type: none"> • Module on Self-Management^{xxxv} • Don't Forget About Self-Management^{xxxvi}



	<p>This strategy involves the learner monitoring and evaluating whether they exhibited desired behavior (or behaviors), documenting their performance of the behavior(s), and then reinforcing themselves if all tasks were completed to expectations.</p>		<ul style="list-style-type: none"> • Self-Management for Children with Autism^{xxxvii} • Self-Management for Students with Autism Spectrum Disorders^{xxxviii}
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Strategies for Responding to Misbehavior

Strategy	Description	This is helpful when...	Resources
Extinction	<p>Extinction is a strategy used to reduce the occurrence of undesirable behavior by withholding or removing whatever has been reinforcing that behavior.</p>	<p>a problem behavior is interfering with a student or students being able to access the curriculum.</p>	<ul style="list-style-type: none"> • Module on Extinction^{xxxix} • Supporting and Responding to Students' Social, Emotional, and Behavioral Needs^{xl} • Extinction Procedures^{xli}

Strategies for Selecting and Monitoring Interventions

Strategy	Description	This is helpful when...	Resources
Functional Behavioral Assessment	<p>A functional behavioral assessment (or FBA) is a systematic process for determining the function (otherwise, the purpose) of a student's behavior. This process also includes identifying events that happen before or after the behavior that triggers or maintain it. Once an FBA is complete, an evidence-based intervention can be developed to reduce challenging behaviors</p>	<p>typical strategies for managing a student's or students' behaviors (such as a look, redirection, phone calls home, detention, etc.) do not appear to be working and the behaviors are interfering with learning.</p>	<ul style="list-style-type: none"> • Module on Functional Behavioral Assessment^{xlii} • Tier 3 Comprehensive Functional Behavior Assessment (FBA) Guide^{xliii} • Tier 3 Brief Functional Behavior Assessment (FBA) Guide^{xliv} • Efficient Functional Behavior Assessment: The Functional Checklist for Teachers and Staff (FACTS)^{xlv}



	and teach more appropriate replacement behaviors.		
Data-Based Decision Making	<p>Data-based decision making is a touchstone of evidence-based practice. Data collection has two primary purposes. The first is to assess and measure student behavior. At the schoolwide, classwide, and individual level, data is used to evaluate the frequency of the behavior, the environments under which behaviors occur (e.g., location, subject area), and the function of the behavior (Horner & Sugai, 2015). The second purpose of data is to measure treatment fidelity (Fryling et al., 2012). Considering comprehensive lists of evidence-based practices, there are guiding principles that make data systems helpful to educators. Before collecting or using data, it is essential to clarify what decisions will be made, who will make decisions, and how often data are reviewed to make such decisions (Horner et al., 2001; Lewis-Palmer et al., 1999).</p>	trying to respond to students' needs in a timely and efficient manner.	<ul style="list-style-type: none"> • Video of A Team Using TIPS^{xlvi} • Supporting and Responding to Students' Social, Emotional, and Behavioral Needs^{xlvii} • Guide on Classroom Data: Using Data to Support Implementation of Positive Classroom Behavior Support Practices and Systems^{xlviii}

The Takeaway: Class-Wide and School-Wide PBIS' Likely Impact on Students with ASD

This brief intended to bridge the "research-to-practice gap" by providing educators with resources to effectively meet the needs of all students, including especially those diagnosed with ASD, within general education settings. This practice brief is the first in a series of briefs focused on the impact of SWPBIS on

students with ASD and, most notably, how to enhance the effects of SWPBIS for students with ASD. Research involving students with disabilities (including those with ASD) has indicated multiple benefits of SWPBIS, such as less class time spent engaging in problematic behaviors, reduced out of school suspensions (OOS), and fewer placements in alternative settings (Gage et al., 2019; Grasley-Boy et al., 2019; Loman et al., 2018). This is important because the educational outcomes, particularly vocational outcomes, are poor for these students (Hendricks, 2010; Holwerda et al., 2012). The use of the aforementioned evidence-based practices will likely streamline educational professionals' efforts while improving their ability to support students with ASD within general education and inclusion contexts. Upcoming practice briefs will be focused on the beneficial impacts of these strategies.

Embedded Hyperlinks

- ⁱ <https://afirm.fpg.unc.edu/task-analysis>
- ⁱⁱ <https://www.iidc.indiana.edu/irca/articles/applied-behavior-analysis.html>
- ⁱⁱⁱ <https://www.youtube.com/watch?v=wMVZQICUhAk>
- ^{iv} <https://online.regiscollege.edu/blog/task-analysis/>
- ^v <https://afirm.fpg.unc.edu/social-skills-training>
- ^{vi} https://iancommunity.org/cs/what_do_we_know/social_skills_interventions
- ^{vii} <https://www.youtube.com/watch?v=TkxO3PSzww&feature=youtu.be>
- ^{viii} <https://asatonline.org/for-parents/learn-more-about-specific-treatments/applied-behavior-analysis-aba/aba-techniques/direct-instruction/>
- ^{ix} <http://www.centerii.org/search/Resources%5CFiveDirectInstruct.pdf>
- ^x <https://afirm.fpg.unc.edu/naturalistic-intervention>
- ^{xi} <http://www.kasari.org/treatments/jasper/>
- ^{xii} <https://afirm.fpg.unc.edu/modeling>
- ^{xiii} <https://afirm.fpg.unc.edu/prompting>
- ^{xiv} <https://vcuautismcenter.org/resources/factsheets/printView.cfm/983>
- ^{xv} <https://csea.fpg.unc.edu/high-school-case-studies>
- ^{xvi} <https://afirm.fpg.unc.edu/time-delay>
- ^{xvii} <https://www.pbis.org/resource/supporting-and-responding-to-behavior-evidence-based-classroom-strategies-for-teachers>
- ^{xviii} <https://csea.fpg.unc.edu/node/157>
- ^{xix} <https://afirm.fpg.unc.edu/antecedent-based-intervention>
- ^{xx} <https://afirm.fpg.unc.edu/visual-supports>
- ^{xxi} <https://www.iidc.indiana.edu/irca/resources/visual-supports/>
- ^{xxii} <http://card.ufl.edu/resources/visual-supports/>
- ^{xxiii} <https://www.autismspeaks.org/tool-kit/atnair-p-visual-supports-and-autism>
- ^{xxiv} <https://afirm.fpg.unc.edu/visual-supports>
- ^{xxv} <https://www.unl.edu/asdnetwork/virtual-strategies/visual-schedules>
- ^{xxvi} <https://www.unl.edu/asdnetwork/virtual-strategies/behavior-momentum>
- ^{xxvii} <https://www.mayinstitute.org/news/acl/asd-and-dd-child-focused/behavioral-momentum/>



- ^{xxviii} <https://www.pbis.org/resource/supporting-and-responding-to-behavior-evidence-based-classroom-strategies-for-teachers>
- ^{xxix} <https://butterflyeffects.com/autism-learning-center/using-behavioral-momentum-to-increase-motivation/>
- ^{xxx} <https://afirm.fpg.unc.edu/reinforcement>
- ^{xxxi} http://autismclassroomresources.com/reinforcement-in-classroom_19/
- ^{xxxii} <https://www.pbis.org/resource/supporting-and-responding-to-behavior-evidence-based-classroom-strategies-for-teachers>
- ^{xxxiii} <https://afirm.fpg.unc.edu/differential-reinforcement>
- ^{xxxiv} <https://ebip.vkcsites.org/differential-reinforcement/>
- ^{xxxv} <https://afirm.fpg.unc.edu/self-management>
- ^{xxxvi} <https://www.iidc.indiana.edu/irca/articles/dont-forget-about-self-management>
- ^{xxxvii} <https://bestpracticeautism.blogspot.com/2012/08/self-management-evidenced-based.html>
- ^{xxxviii} <https://ttac.odu.edu/autism/self-management-for-students-with-autism-spectrum-disorders/>
- ^{xxxix} <https://afirm.fpg.unc.edu/extinction>
- ^{xl} <https://www.pbis.org/resource/supporting-and-responding-to-behavior-evidence-based-classroom-strategies-for-teachers>
- ^{xli} <http://www.educateautism.com/applied-behaviour-analysis/extinction-procedure-aba.html#.UixQiH-2eMo>
- ^{xlii} <https://afirm.fpg.unc.edu/functional-behavior-assessment>
- ^{xliiii} <https://www.pbis.org/resource/tier-3-comprehensive-functional-behavior-assessment-fba-guide>
- ^{xliv} <https://www.pbis.org/resource/tier-3-brief-functional-behavior-assessment-fba-guide>
- ^{xlv} <https://www.pbis.org/resource/efficient-functional-behavior-assessment-the-functional-assessment-checklist-for-teachers-and-staff-facts>
- ^{xlvi} <https://www.pbis.org/video/a-team-using-tips-tier-i-coordination-meeting-abbreviated-meeting>
- ^{xlvii} <https://www.pbis.org/resource/supporting-and-responding-to-behavior-evidence-based-classroom-strategies-for-teachers>
- ^{xlviii} <https://www.pbis.org/resource/pbis-technical-guide-on-classroom-data>

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