

**Evidence-Based Practices Research Paper**

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## **Introduction**

When setting up a classroom for students with autism spectrum disorder (ASD), creating a structured and organized environment that promotes learning and reduces sensory overload is essential. Use visual schedules, cues, and aids to help students understand and follow daily routines and instructions. These aids can include visual timetables, labeled storage bins, and visual reminders for behavior expectations. Create a sensory-friendly environment by minimizing visual and auditory distractions. Use soft lighting, reduce clutter, and provide noise-canceling headphones or quiet areas for students who may be sensitive to noise. Consider using sensory tools like fidget toys or weighted blankets to help students self-regulate. Clearly define different areas of the classroom using visual cues or physical barriers. Clearly defining areas can help students understand where they should be and what activities are expected in each area. Use visual labels or color-coded zones to designate different learning areas. Establish predictable daily routines and transitions. Use visual schedules and timers to help students understand the sequence of activities and when transitions will occur. Using consistency and predictability can help reduce anxiety and improve behavior. Provide individual workstations or quiet areas where students can work independently or receive one-on-one instruction. These areas should be free from distractions and have materials and resources tailored to each student's needs. Incorporate social skills activities and opportunities for peer interaction. Use visual supports, social stories, and role-playing to teach and reinforce social skills. Encourage inclusive play and provide opportunities for students to practice turn-taking and sharing. (Gantz, 2007)

Every child with ASD is unique, so it is essential to collaborate with parents, therapists, and other professionals to create an individualized classroom setup that meets each student's specific needs.

## **Classroom Design**

When designing a classroom for students with autism, several essential factors must be considered. First, it is crucial to create a calm and organized environment. This environment can be achieved by using neutral colors, minimizing distractions, and providing transparent visual cues for different classroom areas. (Gantz, 2007)

Additionally, it is essential to have flexible seating options to accommodate different sensory needs. Some students with autism may benefit from having a designated quiet area or a sensory corner where they can go to regulate their sensory input. (Vogel, 2008)

Lighting is another important consideration. Natural lighting is generally preferred, but it is important to have adjustable lighting options to accommodate individual preferences. Some students may be sensitive to bright lights, while others may benefit from increased lighting. Regarding furniture, it is essential to have comfortable and supportive seating options. Some students may benefit from having alternative seating options such as bean bags or exercise balls. Lastly, it is essential to have visual schedules and clear routines to provide structure and predictability for students with autism. Visual schedules can help students understand the sequence of activities throughout the day and reduce anxiety. (Vogel, 2008)

These are just a few considerations when designing a classroom for students with autism. It is essential to consult with professionals and involve the input of parents and caregivers to create an inclusive and supportive learning environment. Creating a calm and organized classroom environment for students with Autism Spectrum Disorder (ASD) involves considering various factors to accommodate their unique needs and promote positive learning experiences. The ideal classroom will use visual aids like schedules, charts, and pictures to help students with ASD understand routines and expectations. Visual supports can reduce anxiety and increase

predictability. Visual supports can be placed on the walls, boards, or the students' desks. (Vogel, 2008)

The classroom should be organized into clear, defined areas for different activities, such as reading corners, workstations, and sensory spaces. This organization helps students understand where they need to be and what to do. The classroom should be kept clutter-free and avoid unnecessary visual or auditory distractions. Use soft, neutral colors on the walls, limiting unnecessary decorations. (Vogel, 2008)

To consider the sensory needs of students with ASD, options for sensory breaks should be provided, and a sensory-friendly space where students can regulate themselves if needed should be created. The ideal classroom will offer various seating options, such as comfortable chairs, bean bags, and standing desks, to accommodate different sensory preferences and provide options for students who struggle with sitting for extended periods. (IRIS Center, 2023)

A quiet corner should be designated where students can retreat when overwhelmed or overstimulated. One should ensure this space is calming and has sensory tools like noise-canceling headphones or fidget toys. Whenever possible, utilize natural lighting as it can positively impact students' overall mood and focus. The use of visual markers or rugs to help students understand personal space and designated areas for specific activities should be utilized. In the ideal classroom, verbal, written, and visual cues reinforce understanding and help students process information. One should establish a predictable daily routine and stick to it as much as possible. Students with ASD often thrive in structured environments. A communication system that supports non-verbal students, such as picture cards or communication devices, should be implemented to facilitate expression and understanding. (IRIS, 2023)

One should include areas that promote social interaction but ensure they are designed to be non-threatening and comfortable for students who struggle with social interactions. (Vogel, 2023) Students should have their own space. One should provide dedicated storage areas or cubbies for students to keep their belongings, reducing anxiety and promoting organization. In the ideal classroom, one should create a system for positive reinforcement, using visuals or token economies to encourage and recognize good behavior and achievements. (Crosland & Dunlap, 2012)

When designing a classroom for students with autism, several essential factors must be considered and utilized to create the ideal classroom environment for students with ASD to perform at their best.

### **How to Determine Needs**

Teachers should go about determining the behavioral, sensory, and social needs of their students with ASD as a member of a multidisciplinary team by collaborating with other stakeholders such as speech therapists, occupational therapists, and psychologists. They can conduct assessments and observations to gather information about the student's behavior, sensory sensitivities, and social interactions. This may involve using standardized assessment tools, conducting interviews with students and their parents, and analyzing data from previous assessments or evaluations. The multidisciplinary team can then analyze the gathered information and develop an individualized plan to address the student's needs.

## **Collaboration**

Collaborating to choose an evidence-based practice for students with Autism Spectrum Disorder (ASD) involves a systematic and well-informed approach to ensure the best outcomes for these individuals. Stakeholders involved in the decision-making process could include special education teachers, speech therapists, occupational therapists, behavior analysts, parents, school administrators, psychologists, and researchers. (Fallon & Zhang, 2023)

Form a multidisciplinary team that represents the various stakeholders. This team should have diverse expertise related to ASD and evidence-based practices. Gather information about different evidence-based practices for ASD. This information could include interventions like Applied Behavior Analysis (ABA), Social Communication Intervention, and Picture Exchange Communication System (PECS). Review academic research, meta-analyses, systematic reviews, and practice guidelines that evaluate the effectiveness of these interventions. Evaluate the quality of evidence, considering factors like sample size, study design, and methodological rigor. Conduct thorough assessments of the individual needs, strengths, and challenges of each student with ASD. This assessment can involve input from teachers, therapists, and parents. Consider each student's developmental level, communication abilities, sensory sensitivities, and behavioral characteristics. (Fallon & Zhang, 2023)

The team should define clear and measurable goals for each student based on their assessed needs. These goals should be realistic and tailored to the student's abilities. The team should match evidence-based interventions to the identified goals for each student. They should consider interventions that effectively address each student's specific areas of concern. The team should recognize that there is no one-size-fits-all approach. Adapt interventions to suit the unique

needs and preferences of each student. Some interventions need to be combined or modified to create a customized plan. (Fallon & Zhang, 2023)

Establish a system for collecting data to track the progress of each student's intervention. The team should regularly review and analyze the collected data to determine the effectiveness of the chosen intervention. Maintain open communication with parents/caregivers. Be sure to share information about the chosen evidence-based practice and its rationale. Collaborate with parents to ensure consistency between school and home environments.

Provide training and professional development opportunities for the collaborative team members to ensure they are proficient in implementing the chosen evidence-based practice. Set regular intervals for reviewing the progress of each student and the effectiveness of the chosen intervention. Be prepared to adjust the intervention plan based on new data or changing student needs. (Fallon & Zhang, 2023)

The team should stay updated on the latest research and developments in ASD interventions. Continuously refine the approach based on new evidence and best practices. Collaboration among stakeholders is critical to making well-informed decisions that best serve the needs of students with ASD. The process should be flexible and responsive to the individual needs of each student while staying grounded in evidence-based practices. (Fallon & Zhang, 2023)

### **EBP Addressing Sensory Needs**

One evidence-based practice (EBP) that emphasizes addressing sensory needs in the classroom for students with Autism Spectrum Disorder (ASD) is using sensory breaks or sensory integration activities. Sensory breaks help students regulate their sensory input and manage

sensory sensitivities, which are common in individuals with ASD. These breaks can prevent sensory overload, reduce anxiety, and improve focus and attention in the classroom.

(Pagitt-Mungai, 2023)

This EBP can be implemented by working with the student's individualized education plan (IEP) team, including parents, teachers, and therapists, to understand the specific sensory sensitivities and needs of the student. When designing the classroom environment, keep sensory considerations in mind. This design can include providing sensory-friendly seating options, reducing excessive visual clutter, and minimizing auditory distractions. Incorporate scheduled sensory breaks into the daily routine. These breaks can be individualized based on the student's preferences and needs. Sensory breaks can involve deep pressure activities, sensory fidgets, swinging, bouncing on a therapy ball, or engaging with sensory bins. (Pagitt-Mungai, 2023) Integrate sensory activities into classroom tasks and transitions. For example, incorporating sensory input during reading time by allowing students to hold a sensory-friendly object can help them focus better. Designate a quiet and comfortable corner of the classroom as a calming space. Students can use this space when they feel overwhelmed or need a sensory break.

(Pagitt-Mungai, 2023)

Involve the student in choosing sensory activities or tools they find helpful. Giving them a sense of control can empower them to manage their sensory needs. Use visual supports, such as visual schedules or cue cards, to help students anticipate and understand when sensory breaks will occur. Maintain open communication with parents, therapists, and other IEP team members. Regularly discuss the effectiveness of sensory breaks and make adjustments as needed.

(Pagitt-Mungai, 2023)



By incorporating sensory breaks and sensory integration activities into the classroom routine, educators can create an environment that supports students with ASD in managing sensory challenges and optimizing their learning experiences.

### **Evidence-Based Practice Addressing Behavior**

One evidence-based practice (EBP) that emphasizes addressing behavior needs in the classroom for students with Autism Spectrum Disorder (ASD) is Applied Behavior Analysis (ABA). ABA is a systematic and data-driven approach to understanding and modifying behavior. It focuses on using principles of behavior to improve socially significant behaviors and reduce challenging behaviors. (Neitzel, 2010)

Here is how ABA can be implemented in the classroom for students with ASD. Conduct an FBA to understand the function (purpose) of the student's challenging behavior. Conducting an FBA involves identifying triggers and consequences that maintain the behavior. Collaborate with the IEP team to establish clear behavior goals that are specific, measurable, achievable, relevant, and time-bound (SMART). Create a BIP based on the information gathered from the FBA. The BIP outlines strategies to address challenging behaviors and promote positive behaviors. Use positive reinforcement to increase desired behaviors. Identify rewards or incentives that motivate the student and provide them when the desired behavior is exhibited. Implement token systems where students earn tokens for appropriate behavior, which can later be exchanged for preferred items or activities. Use visual supports such as schedules, social stories, and cues to help students understand expectations and routines. Provide prompts to assist students in performing desired behaviors, and gradually fade the prompts as the student becomes more independent. (Neitzel, 2010)

Be sure to teach alternative behaviors that serve the same function as the challenging behavior. For example, if a student engages in aggressive behavior to escape a task, teach them to request a break appropriately. (Neitzel, 2010)

ABA is a well-established approach that can help students with ASD develop essential skills, reduce challenging behaviors, and to improve the overall quality of life for students on the spectrum. It emphasizes evidence-based strategies tailored to each individual's needs and behavior patterns. (Neitzel, 2010)

### **Evidenced-Based Practice Addressing Social Interactions**

One evidence-based practice (EBP) that emphasizes facilitating and promoting positive social interactions among students with Autism Spectrum Disorder (ASD) is Social Skills Training. Social Skills Training teaches individuals with ASD the skills to engage in effective and meaningful social interactions with peers and others. (Reichow & Volkmar, 2009)

Here is how Social Skills Training can be implemented in a classroom for students with ASD. Identify the specific social skills that the students need to develop. This identification could include skills like initiating conversations, maintaining eye contact, sharing, taking turns, and understanding nonverbal cues. Break down each social skill into manageable steps and explicitly teach them to the students. Use precise language, visual supports, and concrete examples to help them understand. Model the desired social behaviors for the students. Teachers, therapists, or peers can demonstrate how to engage in appropriate social interactions. Provide opportunities for students to practice social skills through role-playing activities. These activities allow time for students to practice the skills in a controlled, safe environment. Use video modeling to show students real-life examples of appropriate social interactions. This can help them learn by

observing and imitating behaviors. Pair students with ASD with neurotypical peers who can serve as social partners and role models. This can create natural opportunities for social interactions and learning. Organize structured group activities that encourage cooperation, communication, and teamwork. These activities can provide a context for practicing social skills. Provide positive reinforcement and praise when students demonstrate appropriate social behaviors. Rewarding their efforts can increase their motivation to engage in social interactions. Create social stories that describe various social situations, appropriate behaviors, and expected outcomes. These stories help students understand social norms and expectations. Encourage students to practice social skills across different settings and with different people. This promotes the generalization of skills beyond the training environment. (Reichow & Volkmar, 2009)

Provide constructive feedback and support during social interactions. Help students recognize their successes and areas for improvement. Educate classmates about ASD and the importance of inclusion and acceptance. Foster an environment where peers are supportive and understanding. Continuously assess and monitor the student's progress in using the targeted social skills. Adjust instruction and interventions based on their development. (Reichow & Volkmar, 2009)

Social Skills Training helps students with ASD develop the foundational skills to connect with others, build friendships, and navigate social situations effectively. By focusing on explicit teaching, modeling, and practice, this EBP empowers individuals with ASD to engage meaningfully in social interactions and enhance their social well-being. (Reichow & Volkmar, 2009)

**Conclusion**

When designing a classroom for students with autism, several essential factors must be considered and utilized to create the ideal classroom environment for students with ASD to perform at their best.

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