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THE IMPORTANCE OF CLASSROOM MANAGEMENT IN AUTISM SPECTRUM DISORDER

CLASSROOMS

A MASTER'S THESIS

SUBMITTED TO THE FACULTY

OF BETHEL UNIVERSITY

BY

Lindsay Nicklason

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

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THE IMPORTANCE OF CLASSROOM MANAGEMENT IN AUTISM SPECTRUM DISORDER  
CLASSROOMS

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May 2023

APPROVED

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### Abstract

Children that are on the Autism Spectrum thrive on routine, visuals, and calm learning environments. When teaching in an Autism classroom, good classroom management is key to ensuring the students have all the tools they need to succeed. This includes, but is not limited to visual timers and schedules, visuals of common things they will do or will need throughout the day, such as bathroom or pictures of their food and drink options, staff schedules so all the students are engaged and/or supervised at all times, calming spaces for breaks and flexible seating options. The following will go in depth about what these different tools are and why they are important in managing an Autism classroom.

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## **CHAPTER I: INTRODUCTION**

This literature review with application focuses on Autism Spectrum Disorders and classroom management. The focus question is: How do you create a successful autism classroom? This topic includes the areas of staff management, student schedules, staff scheduling, curriculum management, classroom set-up, and having the correct educational aides and equipment to meet the needs of the complex student population.

### **Autism and the Evolution of Education**

Autism classrooms are becoming more and more prevalent in today's school systems as diagnosis rates for Autism Spectrum disorders continue to grow. In the past, children with special needs were institutionalized, stayed at home and did not receive schooling, or were lumped into one classroom, regardless of diagnosis or level of need. These rooms were more like a daycare and did not function as an educational space. With children being diagnosed with autism and other neurological disorders, the need for cluster programs and specialized teaching continues to grow, and we need the research to help us, as educational professionals, to create classrooms that best fit the needs of the students you will be servicing.

### **Outside Perspectives**

Like any other topic, everyone is going to have their own opinion on what successful classroom management looks like. A well-managed classroom has all the tools that students may need to learn and remain regulated. The children are calm and engaged, making positive connections with their teachers and peers while making

progress on their IEP goals and objectives. A general education teacher may see this as a daycare-like setting instead an educational space and may consider a successful classroom to be one where students sit at their desks, face the board, and meet all their benchmarks on their tests. Neither of us is wrong in our thinking of what success looks like, but we are comparing apples to oranges, as the special education setting differs greatly from its general education counterparts.

### **Theoretical Framework**

Autism Spectrum Disorder is becoming more prevalent year after year, and with it, the way we teach children with Autism continues to change as well. According to the Centers for Disease Control, in 2000, children were being diagnosed at a rate of 1 out of 150. In 2020, that rate had climbed to 1 in 36 children being diagnosed as having an autism spectrum disorder. (Center for Disease Control 2023)

The most popular way of teaching children with autism used to be Applied Behavior Analysis or ABA therapy. This therapy is meant to increase language and communication and improve focus, attention, memory, and social skills. It is also used to promote academic progress and decrease problem behaviors. This is achieved, in large part, by using positive reinforcement. Therapists believe that if positive behavior is rewarded, the child is more likely to repeat the behavior. Over the years, controversy has started surrounding ABA, stating that is focused on the wrong things, is too repetitive, and, although no longer used, many parents did not like the harshness surrounding the punishments used in the program. (Anderson, L.K. 2022)

The focus has shifted to how we can teach children on the spectrum, as they do not all respond in the same way. While ABA is still used and can be tailored to meet the needs of the individuals, the way we teach children in the school setting involves visuals, visual schedules, staff that are trained in Autism disorders, and sensory tools, and flexible seating options, as well a classroom setting with the proper lighting and noise levels. These things combined can help all the children in the classroom learn to the best of their ability and have all their needs met.

### **Rationale**

The educational problem being addressed is that of classroom management, why it is important to create and maintain a well-managed classroom, and what happens when this does not happen. This topic is important because children need the correct environment to thrive in the educational setting. If the classroom is a noisy chaotic setting with limited boundaries, and with a teacher who does not have the correct tools and support they need, the students will be disruptive, distracted, and display other negative behaviors. When a classroom is well-managed, and the teachers feel supported and are given the proper tools to do their job, the children will tend to show more positive learning behaviors, including high levels of confidence, focus, and success in their educational goals.

The Centers for Disease Control says that 1 in 36 8-year-old children are diagnosed with Autism Spectrum Disorder (2023), and these numbers are expected to continue to climb. Many, although not all, children on the Autism spectrum have

intellectual impairment, meaning that they need specialized teaching and programs at school that will address their specific needs.

### **Definition of Terms**

One of the key terms to know is Autism Spectrum Disorder, which is defined as any group of developmental disorders (such as autism and Asperger's syndrome) marked by impairments in the ability to communicate and interact socially and by the presence of repetitive behaviors and restricted interests.

Another term is management, which is the act or art of managing: the conducting or supervising of something (such as a business). Classroom management is the act of monitoring and maintaining a successful classroom. Effective classroom management must involve clear communication of behavioral expectations, as well as academic expectations. The classroom environment must also be conducive to learning.

Development delay is when a child's progression slows, stops or regresses. In terms of the autism classroom, visual supports are an object, picture, sign or photo used to promote communication.

### **Research Focus**

This literature review will consider the research regarding the challenges of classroom management in the Autism classroom. Although many articles have been written that provide teachers with suggestions and ideas, the research-based studies of

classrooms that are implementing specific strategies are difficult to find and not very accessible to educators working in schools. In order to provide clear guidance for busy educators, this literature review will look at the different tools that can be used to create and maintain a successful Austim-based classroom.

The literature reviewed will cover topics such as the importance of the use of visual supports, such as communication visuals and visual schedules, staff management, and flexible seating. Some other topics discussed will be classroom set-up considerations, lighting options, noise recommendations, sensory tools to meet the numerous sensory needs of the students, and how all these things can come together to create a successful classroom, where the students thrive both personally and academically, at their own pace.

### **Application**

This is an application project; therefore, you will be reading a literature review and the practical ways the research can be used in the classroom. Many of the pieces in the appendix are items that I created and use in my own classroom. Being able to use and apply my research in the field as my thesis was coming together solidified what I was reading to be true, as the tools they mention I see working in action each day.



## CHAPTER II: LITERATURE REVIEW

In order to run a successful Autism classroom, we first need to know what Autism Spectrum Disorder is. Autism Spectrum Disorder is a neurological disorder that affects a person's social skills and how the person learns, deals with emotions, and communicates (Centers for Disease Control, 2022). A person with ASD may have all of these challenges or just one or two. Some people may be non-verbal, while others may have a full vocabulary. Due to the wide range of needs students with ASD may have, we, as educators, need to make sure that our classrooms are set to serve all our students, meeting each individual's needs.

In June 2020, an article was published that focuses on the differences between novice and experienced teachers when looking at classroom management and how a teacher's level of awareness of their classroom leads to better or worse overall classroom success. If a teacher can effectively monitor the events in their classroom, they can respond appropriately and in a timely manner. The article looks at this topic through classroom management scripts, which “contrast expert and novice teachers’ knowledge and their decisions to act in response to classroom events” (Wolff et al., 2020, p.1).

The authors of this article state that teacher education programs are not preparing new teachers for all the challenges of managing a classroom in today’s times. When it is not known what teachers do outside the classroom or what happens before and after the children arrive or leave, it is hard to give teachers all the tools and/or

resources that they need to succeed in their classrooms. Having all people involved (principals, supervisors) gathering all the information about a classroom, the teacher would get the proper support to maintain a successful classroom. In the conclusion of this article, it is stated that following the scripts written in their article will help teachers deal with the many aspects of managing a classroom.

In an article entitled “Impact of Classroom Environment on Children’s Social Behavior” (2017), Obaki talks about the link between students not having engaging activities and lessons and negative classroom behaviors.

Unlike the article above, Obaki focuses on the classroom environment and its impact on the students’ social skills. When you are a teacher, you are going to have a mix of positive and negative social behavior and interactions between your students. How to organize your classroom, plan your activities, both structured and unstructured, and present yourself as a teacher, tie into your students’ social behaviors.

A classroom should give many opportunities for exploration and learning, where children feel happy and safe. Artwork should be displayed, and the classroom should be colorful and age-appropriate. The classroom should be set up in a way that encourages children to collaborate and build social relationships with their peers. The teacher plays an important role in all of these things being facilitated, and the teacher is consistently making sure the students are interested and engaged in the learning process. There have been many articles on the effects of a child’s social behavior when looking at home life, but not so much on how the classroom environment affects a child’s behavior.

Lastly, the American Psychological Association looks at classroom management as a way to establish and manage good classroom routines and behaviors. The APA looks at using a tiered approach to classroom management, claiming an 80-85% success rate among students, although it has been shown that some students do need a more intense program structure.

In a 2006 survey of pre-k through 12th-grade teachers, many teachers say that they do not feel that they have the support that they need to implement their classroom management ideas, leading to chaotic classrooms and a lack of learning. Classroom management works because they raise the success rates of students. When looking at the tiered model, you must first look at universal instruction, small group instruction, and individual instruction or interventions. A social-emotional component is also a factor in successful classroom management.

When looking at the three studies, it would seem that they all have the same goal in mind, which is to help teachers run a functioning, successful classroom. In one instance, the author is looking at how teacher longevity or lack thereof and classroom awareness relate to a successful classroom, while the other two articles look at the social behavior side of the student and how social wellness contributes to a healthy classroom and vice versa. All three articles present ways you can understand what a functioning classroom looks like and how you can get there as an educator. Now that we know what classroom management should look like, we will look at what a teacher needs to make this happen.

### **Classroom Environment and Supports**

McAllister (2012) provides some important things that should be considered when building a classroom for children with Autism. Some of these things include calm colors and lighting, music, and/or sounds that promote a relaxing environment for the students to learn. The learning space also should have things that reflect the students' interests, helping keep them engaged and feeling like they belong in the classroom (McAllister, 2012). The classroom should also include a space that has little to no stimuli for students to use to calm down when they are feeling overwhelmed. Lighting in the classroom should be low, with blue light sheets placed over fluorescent lights to lower glare. It was also noted that the environment also needs to be able to keep the teacher calm and able to focus on teaching and caring for their students.

According to Woodcock et al. (2006) children on the ASD spectrum tend to like or dislike certain things depending on where on the spectrum they are. They found this data by doing a web-based questionnaire to help them profile children with ASD. They receive 500 responses that helped confirm their findings as to how to tailor the autism classroom. To solidify their findings, the team observed eight children, all on different parts of the spectrum that were playing in a traditional multi-sensory environment and found their questionnaire findings to be true. Children that are on the lower end of the spectrum, meaning that they are functioning at a considerably lower developmental level than their same-age peers, prefer the color red and things that are round in shape, whereas children that are higher on the spectrum like the color blue and a circular

shape. Another difference is that lower spectrum students prefer nursery rhymes and soft music, compared to their higher functioning counterparts, who prefer rock or pop music. Knowing students and where they are on the spectrum can help teachers set up a calm learning environment (Woodcock *et al.*, 2006).

## **Visuals**

While the classroom environment is essential, the tools that students and teachers use within the classroom are what really support the students' learning and well-being. One of the most important tools in an ASD classroom is interactive visuals, such as visual cues and visual schedules. Visuals promote communication, allowing students to see what they are trying to say. Hayes et al. (2010), conducted a study on interactive visual supports in children with autism using three different communication systems, including large group displays, mobile/personal devices, and personal recording technology. The focus group of the study was the needs of the caregivers supporting the students when using communication systems. The group first interviewed three experts in the field of assistive technology and classroom management. Hayes observed the use of visual supports in nine different special education classrooms in different schools, collecting data from each classroom. Researchers also interviewed ten teachers from the same sites for one hour each. At the end of the study, the study group created two new visual prototypes. Mocotos, which was a mobile visual augmentative communication aid and a multi-device

interactive visual schedule system called vSked. The Mocotos were found to be popular among educators because they could take pictures of real-world items and upload them to the program interface instead of printing and laminating numerous cards, creating bulky binders. vSked was a program that allows educators to make visual schedules for their students, reducing anxiety and supporting independence and self-organization.

Visuals are not only for communication but also aid students in task completion and independence. When deciding what kind of visuals to use with a student, the teacher needs to assess the student's needs and what kind of visuals will work best for them. (Meadan, 2011).

There are many different types of visuals from which to choose. One option is a tangible visual to show a student what is coming next. An example given in the article would be showing a student a ball to tell them it is time to go outside for recess, as the ball goes with the outdoor environment. Tangible visuals help the student feel a sense of control in their day and give them something real to tie to their next activity (Meadan, 2011).

Another visual option is the use of photographs, whether they be taken with a camera and printed or images found on the internet. Photographs/internet photos, while more time-consuming than tangible items, can be more tailored to each student. This type of visual is perfect when creating a visual schedule of a student's day (Meadan, 2011).

Visual strips can increase student independence in the classroom by allowing them to wash their hands or use the bathroom on their own. When students are taught to follow the pictures on the strip, they know the order they are supposed to do the task, instilling confidence in the student. Meaden concludes her article by talking about how adults use visuals all the time, such as our cell phone calendars or to-do lists, and that visuals are a simple, non-intrusive way to help students with ASD to function and communicate in the world (Meaden et al., 2011).

Picture visuals are a low-tech way for students to communicate. A high-tech option is an AAC device. AAC stands for Augmentative and Alternative Communication and is a high-tech intervention used to help a person who is non-verbal or has low verbal skills communicate (Light et al., 2013). AAC programs and apps are available on tablets, cell phones, and other technology devices. These programs can be downloaded and then tailored to meet the communication needs of the user. As technology has advanced, more options have become available for those individuals with high motor and/or sensory needs. One example of this progress is the “brain-computer” interface, designed for people with severe impairments in their motor skills. This interface is shown to be less overwhelming for people with high needs in motor function (Light et al., 2013), as it allows the user to look at the pictures that they want to use to communicate versus touching the screen.

A 2012 study covers the changes in AAC technology over the last 40 years. At that time, this technology was only offered to people living in big institutions. Now, AAC

devices are becoming more socially acceptable in school and work environments (J. Light et al., 2012). Looking at all students with ASD, 30-50% of them are non-verbal and may also have sensory impairments, low motor skills, and/or cognitive limitations, making AAC devices a need in the ASD community. The changes in technology will continue helping ASD students for years to come (Light et al., 2012). There are many things to consider when choosing assistive technology for a child. The research team found that, when looking at device abandonment, 8 out of 10 times, the reason that a communication device is no longer being used is that there is a lack of training on the device and partner training issues. If the child is not able to use the device as intended through practice and /or the device becomes outdated, the child will typically stop using it completely. The target market for these devices already has many challenges, so the team researched some different areas of the device and the importance of each one. Looking at the background color grid on the displays, using different colors for each category, such as yellow for toys and green for verbs with the idea that it would help the user better distinguish the different categories. A preliminary study showed that background color did not better support accuracy or speed in finding the correct symbols in children ages 5- 5.6 years of age. It was also found that background color had a negative impact on performance in children 3.6-3.11 years of age when they compared their performance to using grids with no background color. A follow-up student done a year later showed the same results, showing that most children performed best when the symbols were on a white background.



The layout of the visuals, whether it is vertical or horizontal, can also play an important role in the success of the device. Early research (1991) showed that early users responded better to a vertical layout, however, a horizontal layout is most commonly used today. The layout of the device is also determined by the motor needs of the user.

Communication supports are only part of the tools needed in an ASD classroom. Different seating options are another important aspect of the ASD classroom environment, as each student will have different motor and sensory needs.

### **Seating Options**

Havig (2017) noted that there are different types of seating arrangements and tools that can be offered to students. First, there is flexible seating, where students are allowed to sit where they would like in the classroom, not necessarily at their desks. Alternative seating, on the other hand, is when the student is to sit at their desk or table but can choose what they sit on, such as a balance ball or wobble stool. Traditional classroom seating is when the classroom has basic tables, chairs, and desks (J, Havig, 2017). Havig researched the benefits and disadvantages of flexible seating and elementary students, showing that while these options may be a distraction for some, most students in her study showed improved behavior, were more focused on their lessons, and remained on task longer with fewer reminders.

In the *Journal of Teacher Action Research*, research was done with a group of students with ASD using different types of flexible/alternative seating. It was found that

seating options like cushions did not give the students the sensory input that they needed, therefore, did not have an effect on the students' behavior. When the students were given therapy balls to sit on, all students showed a large increase in positive behaviors and engagement. While this study showed the benefits of flexible seating in students with ASD, there was no proven data to tell how the students felt about the seating options (Journal of Teacher Action Research, 2019, p. 122).

Seating can have a direct link to students' behavior. A study published in the *Journal of Autism and Development Disorders* looked into the link between therapy balls as seating and students' behavior in young students with Autism Spectrum Disorder. Researchers did a two-phase study. In phase one, children sat on traditional classroom seating, such as chairs, benches, or carpet squares. During phase two, the children were all given therapy balls to sit on. Results showed that once the students were given therapy balls, their engagement increased, and positive seated behavior was displayed. Teachers in the study also stated that they liked the results of their students using the therapy balls, as it created opportunities for effective instruction.

### **Meeting Sensory Needs**

Autism Spectrum Disorder and sensory processing differences frequently go hand in hand. Roughly 90% of children with ASD have sensory hypo-reactivity, meaning that they need a lot of sensory input in order to respond to it and tend to display sensory-seeking behavior. Sensory-seeking behavior can include needing tight squeezes or pressure put on their bodies. Students may bang their hands, feet, heads, or other

body parts into tables or walls to get the sensory input that they are seeking. On the other hand, 67% of children with ASD have tactile hypersensitivity, meaning that they react quickly to sensory input (Dyonia et al., 2022). Students that are hypersensitive to sensory stimuli may have a hard time with textures, such as a tag on a shirt, or they may react to a simple tap on the shoulder like it inflicts physical pain or discomfort. It is our job, as educators, to figure out what our students' needs are and how we can accommodate them in the classroom.

### **Sounds**

Many people, with or without Autism Spectrum Disorder, have some sensitivity to sounds. In students/people with ASD, simple sounds can trigger physical discomfort and, therefore, a physical response, such as plugging their ears or fleeing the place where the offending sound is happening or has happened in the past. The term Hyperacusis is used to describe the strong reaction to everyday sounds that students/people with ASD have (Stiegler et al., 2010). Hyperacusis is one of the most common conditions reported by people that are on the Autism Spectrum and, for some, can make day-to-day living difficult. When the offending noise happens, or the student feels it may happen, they may display physical behaviors, such as self-calming strategies, fear responses, or emotional outbursts. These can be displayed as a child covering their ears, throwing a tantrum, or eloping from the area that the sound is coming from or making noise themselves, such as humming or singing to drown out the uncomfortable noise happening around them. Some students may have been known to engage in

self-harm, trembling, and/or hyperventilation (Stiegler et al., 2010). One idea Stiegler (2010) has is putting a person with Hyperacusis through sound desensitization therapy. An example is a student who has a physical reaction to a toilet flushing. That student would be exposed to the sound over and over again through a visual of a toilet and the flushing sound, flushing the toilet with them right outside the bathroom, and so on until the student could handle the sound. This does not always work and should only be done under the supervision of professionals and with consent from the student's parents. This does not always work; however, in this case, the student was able to use the restroom as long as he knew that someone else would flush the toilet after he was at the door. This way, he was still being exposed to the sound but could work his way closer to it at his own comfort level.

An article titled "*An Observational Study of Classroom Acoustical Design and Repetitive Behaviors in Children with Autism*" (2016), it is noted that the actual design and placement of an Autism-based classroom within a building is key to sound cancellation and the success of the students within.

Kanakri et al. (2017) states that students with ASD take in sensory information differently than their neurotypical peers and that architects need to be taking this into consideration when designing classrooms meant for students with Autism Spectrum Disorder. ASD causes differences in a person's auditory pathway, making it hard for these students to filter out background noise, breaking their focus, and, at times, leading to challenging behaviors.

Sound canceling design in these classrooms is the first step in helping students feel comfortable in their classroom setting. Things that could be put in place to help control noise are acoustical tiles, cloth window coverings, sound-absorbing ceiling materials, padded cushions, and lights that do not emit a buzzing sound, such as fluorescents. Having a buffer between neighboring classrooms and busy hallways is two more ways to reduce classroom noise.

Kanakri goes on to say that the decibel level in an unoccupied classroom should not exceed 35 and that the signal-to-noise ratio in the classroom should be at +15dB when it reaches the child's ears. The author also notes that, in an unoccupied classroom, the reverberation should not go above 0.6 in a small classroom and no higher than 0.7 in larger spaces. When a classroom is occupied, the level of noise will frequently increase throughout the day, so background noise should not exceed 35 dBA.

It is not always an option to keep building noises at bay, so we must look at other ways to help our students deal with the day-to-day noises of the classroom. One of the most commonly used tools to reduce noise is noise-canceling headphones.

A study done in 2016 tested the effectiveness of noise-canceling headphones in a group of 21 students on the Autism Spectrum, ages 4-16 years old. The student test group was made up of 16 boys and five girls. In the study, students were asked not to wear any noise-canceling devices for two weeks. The test group was then asked to wear noise-canceling headphones for two weeks at random times throughout their school day.

Even though four students refused to wear the headphones or ear muffs, the results of the study showed that students were meeting their goals at a higher rate when the headphones were being used. The behaviors of 5 students also positively increased when headphones were used.

The conclusion of this study showed that noise-canceling headphones do have a positive effect on students with ASD, blocking out auditory stimuli that would otherwise distract them or lead to problem behaviors (Ikuta et al., 2016).

### **Lighting**

Choosing the correct lighting for your classroom is just as important as choosing the correct seating options and sound machines when you have students with Autism. Lighting can impact their attitudes and how the children behave.

The two main types of lighting options used in most classrooms are fluorescent and LED lighting. Fluorescent lights, according to the Merriam-Webster dictionary, are *“a usually tubular electric lamp having a coating of fluorescent material on its inner surface and containing mercury vapor whose bombardment by electrons from the cathode provides ultraviolet light which causes the material to emit visible light”*. LED lighting is more efficient than fluorescent lighting, lasting longer than fluorescent tubes, but they produce the same type of light. What kind of light is best for an environment that caters to children on the spectrum?

An article posted by Advances in Pediatric Research looks into the impact of fluorescent and led lighting on the way students behave and the attitudes that they

present. Morrow et al. discovered a direct relationship between CCT (correlated color temperature) and the effects on students' behaviors and attitudes. Even though these are not visual effects, such as outward behavior issues, classrooms with high levels of CCT have students that are more alert, have higher energy levels, and have positive attitudes.

There is a difference between the non-visual effects between LED and fluorescent lights. LED lighting can be tunable, meaning that the user can change the color, illumination, and temperature of the lights, which has been shown to benefit the learning environment. When the lights are at lower tones, students are better able to do multiple tasks and switch between tasks. LED lights that are set to a higher color promoted students who were awake, had positive attitudes, and were able to increase their speed when performing tasks of visual perception and cognitive tasks, which is also seen when given fluorescent lights at a lower color temperature.

The study found that LED lighting creates a positive and productive learning environment. Teachers that participated in the study stated that they had fluorescent lighting in their classrooms and that the flicker that the lights produced was known to cause feelings of illness, eye strain, discomfort, and a reduction in the speed of classroom performance. The study concluded that tunable LED lighting is the best option in the classroom environment.

### **Classroom Set-up**

Aside from the above factors, there are other things that need to be considered when designing an Autism classroom environment. In a 2021 study entitled, *Creating Visually Appropriate Classroom Environments for Students With Autism Spectrum Disorder*, the authors discuss how teachers can make their ASD classrooms comfortable for their students and their sensory needs. During classroom setup, teachers will typically make an environment rich in information where most students would thrive. In the ASD classroom, too many decorations or colors can be overstimulating to the students. To make a successful classroom environment, Martin et al. (2022) recommend some ways to make a space where our ASD students can learn.

Seats should be facing the teacher, not each other, to help them maintain focus on the lesson being taught. Wall displays should be relevant to the topics being discussed, and visual cues should be placed around the classroom, such as stickers on the floor to show students where to line up. Some other recommendations are to keep distinctive activity areas, helping in transitions throughout the school day and reducing brightness and glare, allowing as much natural light as possible. When things must be displayed, it is best that they are presented in a simple, high-contrast way. To help children stay organized, individual lockers or cubbies are recommended.

The British Journal of Special Education (date) reviewed an Autism Spectrum Disorder Design Kit, helping architects and designers make inclusive environments. The kit explains four key components to consider when designing an Autism classroom. The first point is that the lighting, coloring, and sound support relaxation and allow the



children to settle into work. Secondly, there needs to be plenty of space for the children to de-stress and find comfort as needed. Then, the kit recommends that the classroom environment has different areas that include things of high interest to the students. Lastly, the layout should be simple, calm, and organized, with good acoustics, indirect lighting, and tamper-proof elements.

### CHAPTER III: RESEARCH APPLICATION

Overall, special education teachers feel that they do not have the support they need to ensure that all the correct strategies and environmental needs are in place in their classrooms. Children with Autism spectrum disorder need help to learn how to deal with their emotions, effectively communicate and be in a setting that can give them the tools that they need to succeed academically (Centers for Disease Control, 2022). When a teacher is not given the proper support, teachers burn-out, due to having unorganized, chaotic classrooms. Having a well-managed classroom raises student success rates. When we help teachers run a functioning classroom, we are supporting the success of students and teachers alike.

The differences seen between novice and experienced teachers show in the varying levels of success in the classrooms. Novice teachers do not generally have the classroom awareness that experienced teachers do, leading to more classroom failures for new teachers. (Wolff et al., 2020, p. 1).

The American Psychological Association presents a tiered approach to classroom management, looking at universal instruction, small group instruction, and individual instruction. Having the three tiers keeps children engaged and gives them three different learning style options.

Classroom management is not just about the length of time a teacher has been in the field or how instruction is planned. In special education, you also need to consider things like calming colors on the walls, what kind of lighting is used, and what kind of

sounds are heard in the classroom. Children need to be surrounded by things of interest to them, making them feel like they belong in the space (McAllister, 2012).

### **Visuals and Communication**

Visuals are a big part of a successful autism classroom. Whether the students are verbal or non-verbal, visuals can support them in self-organization, and understanding what will happen during the day and gives them the ability to advocate for themselves, getting their needs and wants met throughout the day. Hayes et al. (p. 663-680) share in their 2010 study that using visual tools “enable learning and the production of language”, which makes their proper use important, especially in our non-verbal learners, as the hope is for them to be able to communicate vocally one day. There are several different ways that visuals can be beneficial throughout the day. Using visuals of what the cafeteria is offering that day allows students to make their own lunch choices. Visuals of snack options allow the same independence. Having visuals of what toys are in what cabinets in the classroom keeps the room neat and clean but still allows the children to request what they would like to play with.

There are many different types of visuals you can use. Meadan (2011) gives many examples, such as using real objects, photographs, and line drawings. There are also different types of visual schedules, such as daily schedules and mini-schedules.

Many students on the autism spectrum thrive on routine and knowing what to expect. Having a visual schedule (Appendix A) for each student takes away the anxiety of the unknown and gives them a feeling of power over their day. Creating a schedule for

staff (Appendix B) also keeps the room running smoothly, as it ensures all students are supported throughout the day. Having the staff schedule also promotes routine, as the same staff support the same students at the same times each day. This also is helpful to have when you have a substitute para or teacher because then they have a guide to their day.

Other visuals that can be used are communication or conversational visuals and functional skill visuals. Conversational visuals (Appendix C) would be used to ask for help, to request more, or to let staff know that they are all done with something. Functional visuals (Appendix D) are used for Teacch stations and job charts, allowing students to know what tasks need to be done and in what order. This gives clear directions as to what is expected and when the work will be finished so they can move on to a preferred activity. Choosing what to eat during the day can also pose a challenge to a non-verbal student. Having snack (Appendix E) and lunch choice visuals (Appendix F) give the power of choice to the student, leading to better eating habits throughout the day.

Students with ASD can also have challenges managing their emotions. Using a calming clipboard and/or calming visuals (Appendix G) can aid students in naming their feelings and choosing some self-regulation tools that they know will help them calm their bodies and get back on track.

Another option for communication is an AAC or augmentative and alternative communication device (Appendix H). Light's article shows that the rate of autism is

rising, with 1 in 88 children being diagnosed as on the autism spectrum. Of these children, roughly 30-50% of them do not have functional speech, making AAC devices a needed option for the autism community. AAC devices are typically on a personal mobile device, such as a tablet or Ipad, and have different categories, from food, to people, places, actions, and toys. When a student pushes a button, the device says the word out loud. Students can use one button to make one word, pushing a sequence of buttons to form a sentence, or, one button can be set up to say a whole sentence or phrase. This is the best option for those with low motor and/or cognitive skills or those just starting out using an AAC device.

### **Flexible Seating Options**

There are three traditional seating options most used in classrooms. There is your typical seating set-up, with desks and chairs and alternative seating, where students are expected to sit at their desks but can choose what they would like to sit on. The third option is flexible seating (Appendix I), where students can choose their seating and also where they would like to sit in the classroom. Seating options in the autism classroom is one of the important ways a teacher can help meet all of their students' sensory and academic needs.

*The Journal of Autism and Developmental Disorders* did a study to see just how well flexible seating works in the special education classroom. Results showed that, when children were removed from traditional seating and placed on therapy balls, their level of engagement rose and the students showed positive behavior while seated.

Like most things, flexible seating has its advantages and disadvantages, which Havig (2017) talks about in her article, *“Advantages and Disadvantages of Flexible Seating”*. The advantages include the ability to allow movement in the classroom and giving the students a sense of choice and responsibility in their classroom environment. Some disadvantages she found through her study were that the teachers interviewed in the study both stated that there was a lack of student supply storage space with the flexible seating model. The teachers also felt that there was a lack of flexibility in seating arrangements with this model. Ultimately, it is up to the teacher to decide what model of seating is best for their students. For example, one student may need to sit in a rocking chair away from the group, while another may do great at their desk as long as they have a ball chair or wobble stool. There are many flexible seating options for the autism classroom, such as ottomans, stools, tall chairs, sensory pads to put on chairs, and the above-mentioned options. Students should not be pigeonholed into one type of seating during the day. In the morning, a ball chair may be needed to help them attend to the lesson, but, by the afternoon, they may be running low on energy and feeling calmer, so the soothing back and forth of a rocking chair may be the sensation that they are seeking.

### **Sensory Needs**

Statistics in the Dynia study (2022), *“Addressing Sensory Needs for Children with Autism,”* show that about 90% of children on the autism spectrum have sensory hypo-reactivity, meaning they seek out high amounts of sensory input and display

frequent sensory seeking behaviors, such as jumping, head banging, looking for hugs or deep pressure on their arms and legs.

Some tools (Appendix J) to have on hand to ensure your student's sensory needs are being met are weighted blankets and vests of varying weights, ankle and wrist weights, and textured blankets and pillows. Vibrating pillows are also a great tool for those who seek that type of sensory input.

Heavy work is also a good way to create sensory input. Carrying a heavy backpack, pushing a heavy cart, such as a book cart, or having them give a peer or two a ride in a wagon, so they have to pull hard to get the wagon to go.

Sensory needs can also be met by using handheld calming tools (Appendix K). These tools are a great way for students to stay focused and regulated in the classroom so that they can attend to what is being taught. These tools can be small enough to fit in the student's palm, therefore, avoiding distraction to their peers, both in the special education and general education classroom settings.

### **Noise in the Classroom**

Noise sensitivity is common among people with ASD and can sometimes be determined by the severity of their diagnosis. Children lower on the spectrum tend to prefer softer music, whereas their higher-functioning counterparts lean towards rock or pop music (Woodcock et al., 2006).

A 2010 article discusses hyperacusis, which is a word to describe a strong reaction to everyday sounds (Stiegler et al., 2010). This can make general school noises

that most students don't notice but can be physically painful for a student that lives with hyperacusis. Students may run and hide, completely shut down, or cover their ears and lie on the floor when overwhelmed by sound. Students may also become physical and self-harm or try to hurt the origin of the offending sound, such as throwing an object at the loudspeaker or hitting a peer that is crying too loudly.

To help students be able to interact safely in the school setting, noise-canceling headphones (Appendix L) can be offered. These help block out many of the ambient noises and dull noises that would, without the headphones, trigger a student. (Ikuta et al., 2016)

The placement of the classroom within the building should also be considered. Placing an autism-based classroom next to the music room, for example, would create background noise for the students, leading to a lack of focus and an increase in negative behaviors (Kanakri et al., 2017).

There are going to be times that a student is in a situation where headphones may not be available, and the sound is unavoidable or unplanned, such as the music being suddenly turned up at a school assembly. This is when we have to give our students other tools to help them learn to get through these noise events. Social stories about what to do when it gets too loud are a simple tool to use for any situation. Teaching students that they can cover their ears or ask to leave the area are other tools we can give them for unexpected situations.

### **Lighting**



Lighting in the autism classroom is an important part of your classroom planning measures. Lighting can have impacts on student behavior and attitude. Morrow et al, (2018) showed that LED lighting is the best option for the classroom, as it is tunable, so the teacher has the ability to change the lighting depending on student need and/or comfort level. If tunable LED lighting is not an option in your classroom, fluorescent light filters (Appendix M) can be used to tone down the lights, making them softer and easier on students' eyes.

### **Overall Classroom Set-up**

While all the above-mentioned pieces are important for student success, the way your classroom is set up overall also determines how students behave and learn. In a study conducted in 2022 by Martin and Wilkins, the authors discuss how teachers need to make sure that their classrooms are comfortable for their asd students, keeping their sensory needs in mind during setup. The difference between setting up a general education classroom and an autism-based classroom is making sure that the walls are not covered in information, which can be overstimulating for the asd learner, where, typically, the general education classroom environment has many different learning tools posted throughout the classroom. However, Obaki (2017) says the classroom should be colorful and age-appropriate, displaying their art on the walls. The classroom set-up should promote collaboration and play. In the end, the teacher needs to set up their classroom following the research that best supports the current needs of their students.

A group of students without this need might be okay with things on the walls and would then benefit from functional decorations, such as academic-focused displays.

Seating options, while remaining flexible, should be facing the teacher, not one another, during learning times. This example (Appendix N) shows an example of what a successful classroom setup could look like. This is only an example, as a teacher needs to arrange their classroom in a way that promotes learning, positive behaviors and attitudes.

Visual cues in the classroom are also used to help students see where to line up or how to wash their hands (Appendix O). Cues like these boost student independence and, in turn, student confidence.

Lastly, ensuring students have a safe space or quiet space in the classroom sends the message that, if they begin to feel overwhelmed or overstimulated, they have a place they can go to calm their bodies and minds. The review of Autism Spectrum Designer Kits by the British Journal of Special Education showed how important having these spaces are, especially when put together with all the other aspects of creating an autism spectrum classroom.

## **CHAPTER IV: DISCUSSION AND SUMMARY**

### **Summary of Literature**

Autism Spectrum Disorder is on the rise in the United States, leading to the rise of Autism-based programming in schools across the country. Autism Spectrum Disorder is a developmental/ neurological disability caused by differences in the brain. People with ASD may behave, communicate, interact, and learn in ways that are different than most other people” (Centers for Disease Control, 2022). Due to these developmental challenges, the management of these classrooms is directly related to the success of our special education community. Classroom management is not just about how the teacher and administration run the classroom, but all the pieces that go into a classroom, such as communication supports, visual supports, lighting and noise control, and flexibility in seating options. Each of these things is part of the classroom management puzzle.

### **Classroom Management and Teaching**

You can use all the supports in your arsenal, but if you, as a teacher, cannot manage a classroom, those supports are all for nothing. A teacher needs to be able to monitor classroom events and respond to those events promptly (Wolff et al., 2020, p. 1). Wolff and her team of researchers found that professionals need to have a vision that relies on the way they perceive situations along with their ability to use their existing knowledge to interpret what they are witnessing. Researchers go on to discuss how novice teachers have a more difficult time managing their classroom because they lack

support and experience. Burn-out rates among teachers that feel unsupported in their classrooms are higher than those teachers who have support.

If a teacher is unsupported or feels as such, not only does the teacher suffer, but their students do as well. A lack of engaging activities in the classroom can lead to negative behaviors in students. The way a teacher organizes their classroom, and the demeanor they present have a direct impact on a student's social behaviors. Obaki (2017) found that a teacher that can use their creativity to plan and execute their teaching in a caring matter, instilling positive social behavior in the children in their care. A teacher can only teach in this way if they are provided with the proper tools. On the other hand, Obaki also talks about the impact of administrative style teaching on children's social behavior, finding that teachers that exhibit administrative behavior without seeing the student's needs and love, this could encourage bullying and hostility in the classroom among the students. Teachers who present with this teaching style typically are frustrated with their own administration and/or do not have the appropriate teaching tools, furniture, toys, or other supplies to create a positive classroom environment.

Lastly, the American Psychological Association recommends a tiered teaching method. In this model, the teacher would first focus on whole-group instruction, teaching the class concepts to the whole class at the same time. From there, the teacher would then focus on small-group instruction and then, lastly, individual instruction. In a

2006 survey of preschool to twelfth-grade teachers, this model showed an 80-85% success rate among the students.

Looking at the three studies, it would seem that Wolff et al. (2020), Obaki (2017) and the American Psychological Association (2006) have the same thoughts on the importance of effective classroom management and what teachers need to succeed. Although they had some different ideas as to how to achieve a well-managed classroom, the goal of the three articles was the same and that was to support teachers so that they can support their students.

### **Classroom Environment**

The classroom environment is important in special education because there are so many things to consider, such as lighting, calm colors, and music. In 2012, McAllister et al. wrote an article about the importance of creating the Autism classroom with the unique needs of the students in mind. The study finds that students with ASD that are in a poorly designed environment struggle with learning. Students that are in an environment that puts them at ease tend to have an increased chance of success. Some examples of this would be having a quiet space in the classroom free of stimuli for students to rest in when their body and/or mind need a break. Low lighting or lights covered with blue light filters to reduce glare is another way to create a calm environment.

A 2006 study showed that where a child is on the Autism spectrum can play a role in what colors or music should be used in the classroom. Woodcock et al. (2006) did

a study on different colors and music types and the effect they had on children on different parts of the spectrum.

The above table shows the results of an internet survey the authors conducted on 500 participants. Results showed that children that are on the lower end of the spectrum have very different likes than children on the higher end of the spectrum. When looking at the dislikes, however, it is shown that the dislikes between the two groups were very similar. It has been proven that the classroom environment needs to be taken into consideration when putting together an Autism based classroom. (Woodcock et al., 2006, McAllister, 2012)

### **Classroom Management and Visual Supports**

Whether your students are verbal, non-verbal, or somewhere in between, having the proper visual support for the students in the classroom is a vital piece of the Autism classroom puzzle. Hayes, et al, in 2010, conducted a study looking at three different communication systems. Hayes found that visual supports enable learning and support the production of language. Paper visual supports are time-consuming to make, so Hayes looks at alternatives that teachers can use that do not require the time that paper visuals do to prepare. Visual supports enhance communication in students that have little to no verbal communication and can be presented in different ways. Hayes and his team interviewed professionals in the field of assistive technology and ten different special education teachers. Teachers and caregivers all said that creating visual support was a necessary, but time-consuming task, as all students have different communication

needs, therefore, many of the created visuals are personalized to a specific child. When you have a class of 8-10 students, this is a lot to create. At the end of their research, the team created two new visual prototypes, both of which were technology-based, cutting teachers' prep time significantly.

The first prototype is called Mocotos. This is a mobile augmentative communication aid that is displayed on a cell phone-size touchscreen device. While initial set-up may be time-consuming, the device is simple to use. The pictures on the screen look like paper pictures or teachers can take and upload real photos. This device allows students to talk to their teachers and peers, making sure their needs are met and their thoughts and ideas are heard.

The second prototype is called vSked. This is also a mobile device that allows teachers to create students' visual schedules. Having their daily schedules available reduces anxiety in students because they know what to expect during their day. This also supports independence in the students, which is a goal that many teachers and caregivers have for their students/children.

An article written by Meadan in 2011 discusses the different types of visuals that can be used and why visual supports are so important. The task placed on teachers is to know what kind of visuals should be used for their students. All student needs and abilities are different, so it is important to choose the correct visual supports for each student. There are many options, such as real-life pictures, line drawings, and objects.

Visuals need to be durable and portable, with clear pictures that the student will understand.

Along with visuals to help them learn and communicate their wants and needs, there are also visual schedules. These will allow students to know what to expect in their day, reducing anxiety and promoting self-sufficiency.

Lastly, a 2013 study performed by Light and her team, showed the benefits of AAC devices. AAC stands for Augmentative and Alternative Communication and is typically a downloaded program on a tablet or cell phone. Students have buttons to choose from that speak for them, allowing them to form sentences and have full conversations with others. For students with low motor function, there is also the brain-computer interface, which allows the user to select pictures using their eye gaze. This form of AAC device is used frequently with people with cerebral palsy, as a common trait among people who live with cerebral palsy and have low motor control.

In conclusion, all three researchers agree when it comes to the importance of visual support in the classroom. One looked at low-tech options, and the other two considered high-tech supports, but all of these options meet the same goal, which is to give students a voice (Hayes et al. 2010, Meadan, 2011, and Light et al., 2013).

### **Seating Options**

No two people with Autism are alike, with each individual having their own unique expression of their preferences and needs. Due to this, having numerous seating options in the classroom promotes success among students. Havig (2017) discusses



three different options for seating, such as flexible seating, alternative seating, and traditional seating. Regardless of what you choose, the goal should be to create a classroom setting where learning and growth can happen. The seating choice that works for some classrooms may not work for others, so teachers need to look at their students and their needs and choose the best option for their students to learn, grow, and display positive behaviors.

The Journal of Teacher Action Research (2019) aligns with the thinking of Havig, also showing a positive increase in learning, health, and behavior in Autistic and ADHD students when offered flexible seating. Their research showed that students with ASD reacted best to seating options that allowed them to move and/or created sensory input, such as therapy balls.

A third study, published in the Journal of Autism and Developmental Disorders (Sorrell, 2019), also links flexible seating to behavior. Their study showed that students, when moved from traditional seating to therapy balls, their engagement increased, and they displayed positive seated behavior.

### **Meeting Sensory Needs**

Children with ASD have a high chance of having issues with sensory processing, with around 90% of children having low sensory input, and 67% of children being on the other end, having high sensitivity to sensory input. Dynia et al. (2022) did a study surrounding the high sensory needs of children with ASD and what teachers can do to meet these needs in the classroom. The team recommends that teachers collaborate

with the occupational therapist at their school to explore the students' different sensory needs to ensure that they are all being met.

### **Sounds and Lights**

The kinds of sounds you will have in your classroom and their volume, along with the types of lighting used, should be taken into consideration when planning your classroom layout and routine. While timers that beep or bright moving lights may be fine for some students, timers that beep may be a trigger for others, causing them, at times, to feel physical pain.

Stigeler et al. (2020) found that it is common among people on the Autism Spectrum can feel anxious or scared around certain sounds and may present with uncomfortable physiological feelings due to their automatic or behavior-driven responses to sounds they find offensive. Given the correct support, students can learn to remain regulated when confronted with noises that make them uncomfortable. As a classroom teacher, it is our job to keep our students calm throughout the day, keeping them in mind when choosing music, if you want background music on throughout the day, sound machines, and the use of timers that beep vs sand timers or other visual timers.

Looking at the way sounds travel and what sounds are going to be surrounding the Autism classroom may not be something we can control, but those who design the buildings and determine what classrooms will go well where is important to think about. You would not want a classroom full of children with noise sensitivity next to the band

room, for example. Kanakri et al. say that it is important to have sensory zones, by offering quiet spaces for children to go if they need a self-regulation break. By giving children these spaces within the classroom and the building, children who are having a hard time managing noise have a place to escape to, even if for a short period of time.

If you have a student with high noise sensitivity, offering headphones is another option. These are small and easy for a student to store in their desk, so they are always available when needed. Ikuta et al. (2016) looked at children on the spectrum that also had auditory hyper-reactivity. These children may find sound intolerable, and it is our job, as teachers, to make sure these students have the tools that they need to manage all the sounds in their world. Their extensive study concluded that noise-canceling headphones are a useful tool for children with noise intolerance but are not affected by the human voice.

While sound is a big factor in the Autism classroom, lighting is also something to consider and one of the hardest things for a teacher to control, as they are generally not in charge of what kind of lighting is put in their classroom. There are typically two different types of lighting used in classrooms, fluorescent and LED lights. An article posted by Advances in Pediatric Research looked into the effects that fluorescent lighting and LED lighting had on students in the Autism classroom. Morrow et al. (2018) discovered that there was a direct correlation between CCT or correlated color temperature and student behavior. They find, by the conclusion of their study, that lighting that has a higher correlated color temperature impacts attitude, alertness, and

energy level in a positive way. Also, if teachers have the ability to change lighting levels throughout the day, it can support positive student engagement and mood. The study showed that having LED lights in the classroom, which could be adjusted to meet student moods and sensory needs, were more effective in promoting positive behavior and learning than fluorescent lights, which could flicker, lead to eye strain, ill feelings, discomfort and the reduction of speed in classroom performance.

### **Limitations of the Research**

The research on considering classroom management and the Autism setting was already significantly limited. Much of what is available to teachers is not empirical research and instead are articles written by practioners sharing what has worked for them in their classrooms. The scope to this research was kep to studies done in the United States without a specific time range.

### **Implications for Future Research**

What I found lacking in the research was that most of the studies looked at Autism as an umbrella, when, in reality, there are different needs for students depending on the severity of their diagnosis and what setting they are in. Children with Autism in Setting I do not have the same needs as children in Setting III programs.

Researchers should be looking at the federal levels in school and researching how to help a certain level instead of looking at all Autism classrooms as the same. They need to be looking closely at the finances of the schools they are doing their studies in. A school in a wealthy neighborhood is going to have more of a budget to buy the supplies

they need to support these children versus a low-income school. They should be looking at what these lower-income schools can do to support their Autism classrooms on a budget, because, for them, redoing lighting, ordering new furniture, or ordering headphones and fidgets may not be an option. What can these schools do, with limited funds, to still manage their classrooms to meet the needs of their students?

The other need I saw in the research was that most of the research was done with younger students. Students with Autism in the state of Minnesota are allowed to go to a transition program after high school until they are 21 years of age. It would be interesting to see research that shows how these older students can succeed and become more independent.

### **Implications for Professional Application**

The above research applies to my everyday life as a Setting III ASD/DCD teacher. I have to think about the sensory needs of the students, how they react to noise, how to decorate my classroom, and what kind of furniture works or doesn't work to meet everyone's individual needs. Having six students with varying needs, I have noise-canceling headphones on hand at all times, weighted blankets, vests, and ankle weights. I have a quiet space for students to take a break when they get too overwhelmed with the classroom activity, which happens more often for some students than for others.

The studies I found shed light on many of the hurdles students with ASD have to overcome to have a positive school experience, something that comes much easier to

their general education peers. This is the reason why the special education classroom needs to have so many extra considerations than the general education setting. The studies covered so many different levels of autism, so any special education teacher would be able to find the information they need to take the best care of their students, whether it is a veteran teacher that has a new student with a need they have not encountered before, or, a new teacher that needs ideas as to how to make their classroom run correctly.

What I learned, and what I think other educators could learn, is that the needs of these students vary so much, we, as the leaders of our classrooms, need to be ready and willing to do whatever it takes to promote a positive learning environment for our students. An environment that meets all of their needs and is led by a teacher that not only understands these needs but respects them and has the patience to help their students through the tough moments. As educators, I feel that, at times, we can lump our students into a generalized pool and forget that just because they all have Autism they all have the same needs. The studies I found are a great reminder that your classroom is never going to be a one size fits all setting, and it is our job to make sure that all the variations are available to all the students all the time.

### **Conclusion**

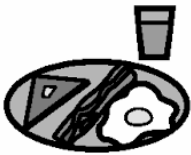





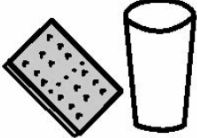



What is the importance of classroom management in the Autism classroom? The research repeatedly showed that a classroom that has the correctly trained staff that follow their student support schedules and has all the proper student support, such as

visuals, visual schedules, flexible seating options, and numerous options to support student's sensory needs have happy, successful students who feel loved and supported in their school environment. The research also showed the importance of having well-supported teachers, who are happy in their school environment as well.


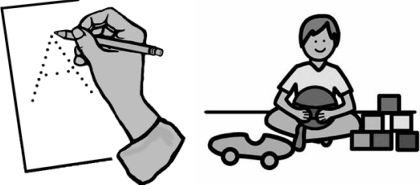
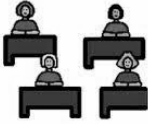

Appendix

Appendix A: Student Visual Schedule

Student's Daily Schedule

<p>Breakfast</p>  	
 <p>bike</p> <p>Walk</p> 	 
	 <p>bike</p> <p>Walk</p> 



 <p>A circular tray containing rows of small balls, a white tub of Play-Doh with the brand name visible, and a stack of three smaller tubs with a piece of dough nearby.</p>	 <p>An illustration of a hand holding a pencil and drawing a dotted line on a whiteboard, and a child sitting on the floor playing with a toy car and blocks.</p>
<p>Work Time</p>  <p>An icon showing four stylized figures sitting at desks, representing a classroom or work environment.</p>	 <p>Self-Regulation</p> <p>A photograph of a sunset over a body of water with a small boat in the distance. The text "Self-Regulation" is overlaid in the center.</p>

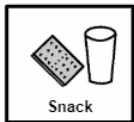
### Appendix B: Staff Schedule

<b>Nicklason</b>
7:30-8:15: Bus MV Breakfast/Choice
8:15-8:30: Academics: MV/Independent Work: AH
8:30-9:15: Prep
9:15-9:30: Snack/Morning Meeting
9:30-10:00: Snack/Guided Play/Bike Rides
10:00-10:30: 1:1 Academics
10:30-10:40: Guided Play: AH
10:40-11:20 1:1 Academics/Weighted Walk: AH
11:20-11:30: Calming Break
11:30-12:00: Your Lunch
12:00-12:35: Small Group/1:1 Academics
12:35-12:45: Guided Play
12:45-1:00: WIN SG/Independent Work AH
1:00-1:15: WIN AH/Independent Work SG
1:15-1:30: Self-Regulation/Snack
1:30-1:45: Recycling AH

1:45-1:55: Classroom Jobs AH

1:55-2:05: Pack up/Parent Pick-up: AH

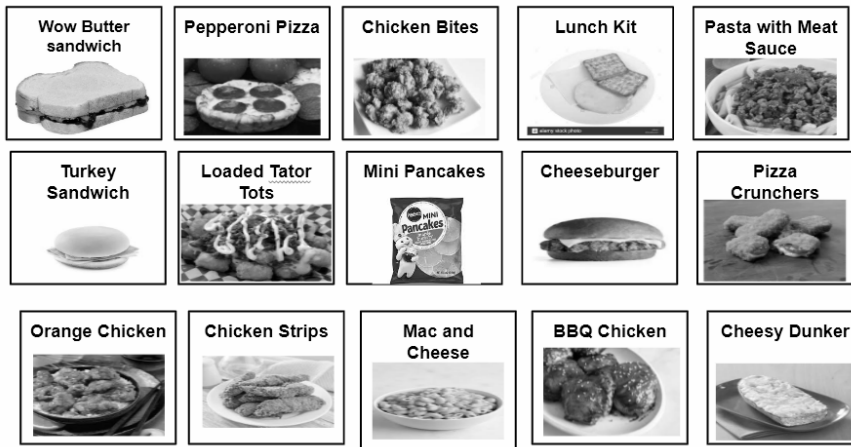
### Appendix C: Communication Visuals



### Appendix D: Functional Skills Visuals



### Appendix E: Lunch Visuals



**Appendix F: Snack Visuals**

**Goldfish**



**Veggie Straws**



**Puffs**



**Nutrigrain Bar**



### Appendix G: Calming Visuals

**Calming Clipboard**

I am feeling:

**STOP**

My body needs to calm.  
I can pick 2 calming tools

**SLOW**

My body is ready now.

**GO**

<b>Mad</b> 	<b>Sad</b> 		
<b>Silly</b> 	<b>Frustrated</b> 	<b>Positive Affirmations</b> 	
<b>Heavy Jumps</b> 	<b>Wall pushes</b> 	<b>Deep breathing</b> 	<b>Calming Sequence</b> 
<b>Blow</b> 	<b>squeeze hands</b> 	<b>rub legs</b> 	<b>stretch</b> 



### Appendix H: AAC Device Example



### Appendix I: Flexible Seating Options



**Appendix J: Sensory Needs**



### Appendix K: Handheld Calming Tools



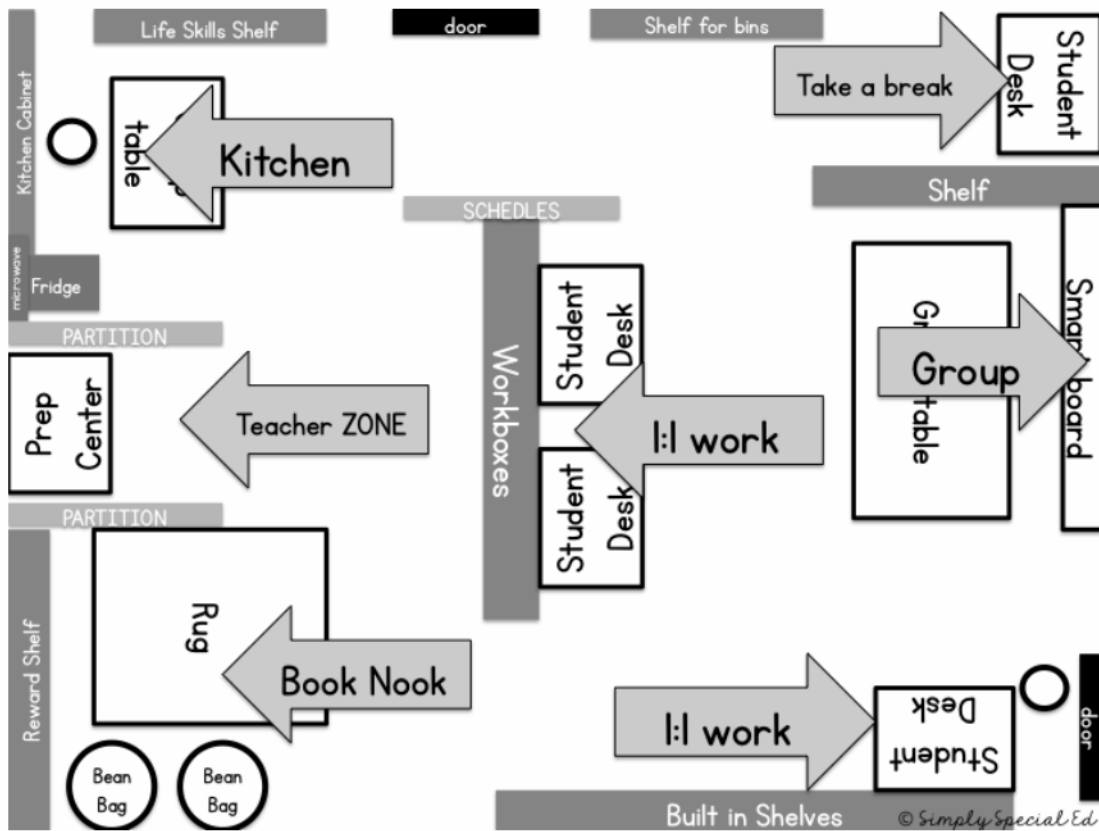
**Appendix L: Noise Canceling Headphones**



### Appendix M: Light Filters



### Appendix N: Classroom Set-up



### Appendix O: Classroom Visual Supports



## References

- Anderson, L. K. (2022). Autistic experiences of applied behavior analysis. *Autism*, 13623613221118216.
- Centers for Disease Control and Prevention. (2022, March 31). *What is Autism Spectrum Disorder?* Centers for Disease Control and Prevention. Retrieved October 12, 2022, from <https://www.cdc.gov/ncbddd/autism/facts.html>
- Dynia, J. M., Walton, K. M., Sagester, G. M., Schmidt, E. K., & Tanner, K. J. (2022). Addressing sensory needs for children with Autism Spectrum Disorder in the classroom. *Intervention in School and Clinic*, 0(0).<https://doi.org/10.1177/10534512221093786>
- Havig, J. S. (2017). *Advantages and disadvantages of flexible seating* (Doctoral dissertation, Minot State University).
- Hayes, G.R., Hirano, S., Marcu, G. (2010). Interactive visual supports for children with Autism. *Pers Ubiquit Comput* 14, 663–680.  
<https://doi.org/10.1007/s00779-010-0294-8>
- Ikuta, N., Iwanaga, R., Tokunaga, A., Nakane, H., Tanaka, K., & Tanaka, G. (2016). Effectiveness of earmuffs and noise-canceling headphones for coping with Hyper-reactivity to auditory stimuli in children with Autism Spectrum Disorder: A preliminary study. *Hong Kong Journal of Occupational Therapy*.  
<https://doi.org/10.1016/j.hkjot.2016.09.001>



- Light, J. & McNaughton, D. (2013). Putting people first: re-thinking the role of technology in augmentative and alternative communication intervention, *augmentative and alternative communication*, 29:4, 299-309  
<https://doi.org/10.1007/s00779-010-0294-8>
- Kanakri, S. M., Shepley, M., Tassinary, L. G., Varni, J. W., & Fawaz, H. M. (2017). An observational study of classroom acoustical design and repetitive behaviors in children with Autism. *Environment and Behavior*, 49(8), 847–873.  
<https://doi.org/10.1177/0013916516669389>
- Kratochwill, T. R., DeRoos, R., & Blair, S. (n.d.). *Classroom management module*. American Psychological Association. Retrieved June 20, 2022, from  
<https://www.apa.org/education-career/k12/modules-classroom-management#:~:text=Classroom%20management%20systems%20are%20effective,their%20social%20and%20emotional%20>
- Martin, R., & Wilkins, J. (2022). Creating visually appropriate classroom environments for students with Autism Spectrum Disorder. *Intervention in School and Clinic*, 57(3), 176–181. <https://doi-org.ezproxy.bethel.edu/10.1177/10534512211014882>
- McAllister, K. (2010) The ASD friendly classroom – design complexity, challenge and characteristics., in Durling, D., Bousbaci, R., Chen, L, Gauthier, P., Poldma, T., Roworth-Stokes, S. and Stolterman, E (eds.), *Design and Complexity - DRS International Conference 2010*, 7-9 July, Montreal, Canada.

<https://dl.designresearchsociety.org/drs-conference-papers/drs2010/researchpapers/84>

McAllister, K., & Maguire, B. (2012). A design model: the Autism Spectrum Disorder classroom design kit. *British Journal of Special Education*, 39(4), 201–208.

<https://doi.org/10.1111/1467-8578.12006>

Meadan, H., Ostrosky, M. M., Triplett, B., Michna, A., & Fettig, A. (2011). Using visual supports with young children with Autism Spectrum Disorder. *Teaching Exceptional Children*, 43(6), 28–35.

<https://doi.org/10.1177/004005991104300603>

Merriam-Webster. (n.d.). *Dictionary by Merriam-Webster: America's most-trusted online dictionary*. Merriam-Webster. Retrieved October 23, 2022, from

<https://www.merriam-webster.com/>

Morrow BL, Kanakri SM (2018) The impact of fluorescent and led lighting on students attitudes and behavior in the classroom. *Adv Pediatr Res* 5:15.

doi:10.24105/apr.2018.5.15

Obaki, S. O. (2017). Impact of Classroom Environment on Children's Social Behavior. *International Journal of Education and Practice*, 5(1), 1–7. development.

Schilling, D. L., & Schwartz, I. S. (2004). Alternative seating for young children with autism spectrum disorder: Effects on classroom behavior. *Journal of Autism and Developmental Disorders*, 34(4), 423–432.

<https://doi.org/10.1023/B:JADD.0000037418.48587.f4>

- Sorrell, M. E. (2019). Perceptions of flexible seating. *The Journal of Teacher Action Research*, 5 (2), 122
- Stiegler, L. N., & Davis, R. (2010). Understanding sound sensitivity in individuals with Autism Spectrum Disorders. *Focus on Autism and Other Developmental Disabilities*, 25(2), 67–75. <https://doi.org/10.1177/1088357610364530>
- Wolff, C.E., Jarodzka, H. & Boshuizen, H.P.A. Classroom management scripts: a theoretical model contrasting expert and novice teachers' knowledge and awareness of classroom events. *Educational Psychology Review* 33, 131–148 (2021). <https://doi.org/10.1007/s10648-020-09542-0>
- Woodcock, A., Georgiou, D., Jackson, J., & Woolner, A. (2006). Designing a tailorable environment for children with autistic spectrum disorders. *The Design Institute, Coventry School of Art and Design*.