

Autism Accessibility in Museums:

A Front-End Evaluation

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Introduction

Museums are a space where the public can visit to view art, history, and culture.

Everyone has the right to visit and to cherish the objects that the museums hold. Although the museum goal is to serve everyone, museums are often not presented in a way that everyone can partake. The environment can often times be restrictive to individuals with disabilities such as Autism Spectrum Disorder(ASD). Neurological disabilities such as ASD do not always present in ways that are easy to understand, and their struggles are normally internal rather than externally visible. It is often hard for neurotypical individuals, whom are typically the ones designing museum spaces, to understand how ASD individuals experience things. The world has become an openly neurologically diverse place as scientific research has developed more comprehensive ways to understand the brain. Neurodiversity has always existed, but as we learn more about how individuals interact with and experience the world, we are better able to create an environment which is most accommodating and accessible for everyone. ASD and the myriad of conditions that accompany it cause individuals on the spectrum to have hindrances in social relationships and sensory experiences.

In order to develop universally accessible museum experiences for a neurologically diverse world, it is imperative to learn as much as possible about what works and doesn't work for ASD individuals from the individuals themselves. Through discussions with parents and educators of children on the Autism spectrum I set out to learn about their unique children learn, what keeps them engaged and excited, and discover any specific examples of good or bad experiences that their children have had in educational, entertainment, or museum settings. I used this information to inform recommendations for a more universal inclusive design of museum galleries and programs.

Review of Literature

Before diving into my research, it was important to explore what previous literature has discovered in the area of education and engagement for individuals with Autism Spectrum Disorder(ASD). “According to the American Psychiatric Association, autism is a pervasive developmental disorder marked by differences in the areas of communication, socialization, and repetitive behavior” (Carnahan, 2009). These differences vary by individual which makes navigating the realm of education and engagement difficult. There are various journals that discuss the topic of how autistic children learn and effective strategies to reach this population. The literature describes a few effective methods for successful education and engagement. Some of the most prominent suggestions that emerged were picture exchange communication systems using augmented and alternative communication, role playing, video support systems, visually interactive materials, embedded choices, and priming.

The strategy of picture exchange communication systems(PECS) using augmented and alternative communication(AAC) comes from the 2012 study by Ganz, Simpson, and Lund. The article describes picture exchange communication systems and augmented and alternative communication and explains the benefits for such a system. “A key feature of the PECS is the picture cards, which contain pictures, also referred to as icons, that represent objects...people...or activities.” PECS utilize these images to represent people, places, things, and feelings that can be paired with sentence stems to aid in communication. One common representation of ASD is difficulty in communication. Individuals with ASD have trouble making proper connections between sights, sounds, thoughts, and meanings which makes verbal communication with others difficult (Burns, 2012). PECS is beneficial for these individuals because it gives them visual tools to communicate when they otherwise may not be able to find the words. Additional benefits of PECS listed in the article state that it requires low cost and it is

adaptable to any situation. Since it consists of simple images and sentence stems, the system can be created using printed images and stored in a plastic bag for easy transport. This also makes it easy to adapt because images can be created to relate to any situation that the individual encounters.

A 2012 study by Ozen, Batu, and Birkan explores how role playing and video support systems help encourage children on the autism spectrum to participate in social learning situations and learn play skills. Children on the autism spectrum have limited social and communication skills, and they will often withdraw from social situations (Ozen, 2012). In the article, the authors describe how they researched the affect that role playing and video support systems have on helping these children interact with others and learn new skills. The results show that role playing helps develop play skills and encourages children on the autism spectrum to participate without feeling inadequate due to their lack of appropriate social skills (Ozen, 2012). In this role playing, children pretend to be a character that is usually written in a script. This enables the child to interact with other children and participate in the activity without the stress of know what to say or how to interact. The prepared role and script does the hard work for them. The second part of their research focuses on using video support systems to help teach a skill or role. The findings show that the children learn the skill or role better when being instructed using role demonstration on a video rather than using a live person (Ozen, 2012). This system is helpful because it is a one-way interaction. Children with ASD have deficits in social interaction and communication, so this one-way instruction gives them confidence to learn the skill or role without the stress of a social communicative interaction.

In a 2009 study by Carnahan, Musti-Rao, and Bailey a method using visually interactive materials and music is researched to determine their effect on ASD children's engagement in both individual and group settings. Autistic individuals in a group with non-autistic peers

represents the least restrictive environment for maximum learning potential. The study, conducted both individually and in a group setting, describes the process of reading a story first with only the story read aloud, next read with interactive sensory materials to enhance the story, and finally with the addition of the story sung to music (Carnahan, 2009). The results of this study found that visually interactive materials enhance engagement and learning when compared to the absence of these materials. Additionally, it shows that when other interventions are paired with music, the results are even greater (Carnahan, 2009).

A final method is supported in an article names “Navigating Autism’s Swirling Waters” by J. E. Hart. The author discusses two main methods: embedded choice and priming. These can be implemented in self-contained environments and in least restrictive group environments. Individuals with ASD “often display problem behavior to escape or avoid joining group activities” (Hart, 2012). Embedding choice involves giving them a choice within boundaries of a maximum of two to three choices. Giving options lets them exert some control over their actions promoting self-confidence, social skills, and motivation. Through this, problem behavior is diminished because the individual feels in control of the outcomes.

Priming also helps to alleviate problem behaviors and potential stressors by fully preparing the individual with ASD before something occurs. Priming involves preparing an individual for an event or activity by allowing them to preview them before engaging in them. “Because they may resist or be anxious about change and the unknown, children with autism should be exposed to or preview activities before engaging in them” (Hart, 2012). Priming takes pressure to perform off of the individual allowing them to become acclimated to the expectations. This helps establish predictability and increases the chance for success. One of the most common forms of priming is a Social Story which depicts an activity or event in pictures with full explanation of all steps and environments that they will encounter.

A study by Beth Davis-Hofbauer titled, “Autism Matters: Making Galleries and Museums ASD/SPD Friendly”, specifically focuses on autism accessibility in museums and supports the previous studies. She interviewed and surveyed autistic individuals, parents of autistic children, and autistic artists. Her results also showed that the key areas of issue of social interaction and sensory perception in museums. Most were not able to be in galleries or showings for a long period of time due to the sensory overload from bright lights, sounds, and social interactions. (Davis-Hofbauer, 2016)

In addition to scholarly articles, I researched what other museum institutions are doing to make their spaces accessible for autistic individuals. There are many museums that are taking progressive actions to be more inclusive. The most notable was the Boston Children’s Museum, The Met, and the Houston Museum of Natural Science. The Boston Children’s Museum developed a comprehensive social narrative to describe a visit to the museum. This is free to download online for anyone planning to visit the museum. The Met also has social narratives that describe the museum experience from different perspectives including school field trips and visits with parents. It also provides maps noting sensory friendly spaces for decompressing. The Houston Museum of Natural Science is incredibly comprehensive in its accommodations. It provides social narratives, visual vocabulary cards, a sensory guide to the museum, and even provides sensory backpacks for visitors to check-out. These backpacks contain tools to help the visitor process the environment, stim, and decompress while still enjoying the museum.

The literature clearly shows that there is a strong interest in creating positive learning environments and experiences for individuals with ASD. The research has moved from simply trying to understand how to best serve autistic individuals sequestered to learning how to provide positive experiences for them in a group of their peers in a least restrictive environment. While the research is diverse, it is also restrictive because most of it focuses on young children. Further

research is needed to confirm or determine the best methods for effective education and engagement for adolescents and adults.

Methodology

Coordination of Interviews:

To locate potential interview participants I reached out to previously established networks of parents and educators of autistic children. I published an call for participants willing to interview with me, and from there I coordinated with respondents to set up times to meet.

I met with the individual participants at their convenience and in locations convenient to them. This included coffee shops, their homes, or their places of work. No compensation was provided for their participation, and no identifying information was recorded. About five respondents replied to my call for participants, but only three were able to coordinate to meet with me. The interviews were recorded and transcribed for analysis purposes.

Research Question:

Research questions for this study revolve around determining what parents and educators of children on the autism spectrum have to say regarding how their children and students learn, what makes their children and students engaged and excited, and discover any specific examples of good or bad experiences that their children have had in educational, entertainment, or museum settings. This is all in an effort to be more informed on autistic learning, engagement, and enjoyment in order to develop more universally accessible and enjoyable learning and recreational museum spaces.

Interview Questions:

The Preliminary interview questions were used as a discussion guide during the interviews. Questions focus on broad and remarkable aspects of the children that affect their learning and engagement. Emphasis is placed on stories to illustrate children's' behavior, and it pays keen attention to overall enjoyment and engagement in an activity rather than strict academic application. Interview conversation revolved around the following questions:

Preliminary Interview Questions
1. What makes your child unique?
2. What types of activities does your child/student enjoy?
3. What keeps your child/student interested in an activity?
4. In what ways does your child/student have fun? Anything specific?
5. What type of learner(auditory, visual, kinetic, psychomotor) would you say your child/student is? Any examples to support that?
6. Are there any challenges to keeping your child/student engaged and on task?
7. Has your child/student had any specific positive or negative experiences in entertainment or museum settings?
8. Are there any other stories or anecdotes you would like to share about your child?

Analysis:

This report utilizes interview data including recordings and transcripts from the three participants. Methods for analyzing this data rely on thematic grouping analysis and discourse analysis techniques. Thematic grouping analysis focuses on grouping strategies to identify common themes among the interview data, draw meaning from them, and communicate the importance. Discourse analysis identifies semiotics within forms of communication and derives the meaning and significance of them.

Limitations:

Limitations of this study include small sample size and limited sample representation. Due to time constraints and scheduling, only three interviews were able to be performed. Of those three, two were parents and one was an educator. With more time and reach, a larger sample size that is better representative of age and spectrum level could be achieved. Also with more time and reach, additional representation of educators could be included.

Findings and Analysis

From my interviews I discovered six overarching themes communicating what helps and hinders learning and engagement for autistic individuals. The first four themes relate to encouraging learning and engagement. The last two themes involve hindrances to learning and engagement. Additionally, through discourse analysis, I discovered subtle and distinct differences in the way that parents talk about their children and the way educators talk about their students.

Overarching Themes
1. Technology
2. Sensory Stimulation
3. Hands-On Activity
4. Preparation/Routine
5. Communication
6. Sensory Overload

Technology:

A technique that was expressed by both parents and teachers to increase learning and engagement for autistic children is the use of technology. Throughout my interviews, both parents stated that their children were more interested and engaged in something when it related to

technology either using technology or relating to something about technology. One parent participant described how everything he enjoys is somehow related to his interest in technology.

When asked about what types of things her son enjoyed, the participant said:

“He has always been into electronics and games ... Mostly anything computer related. He really likes gaming, um, he really likes mostly gaming. About everything he does is somehow involved with it. He likes to listen to video game soundtrack MUSIC. He like to read BOOKS related to video games. He likes to watch YOUTUBE videos related to video games, and he’s just very technical minded.”

She continued with examples of how she uses technology to enhance his learning and engagement in a task:

“With homeschool ... I’ll try to kind of find things that, rather than have him write things down on paper, we’ll type them on the computer or find a website that has a game related to whatever we are learning, and it definitely helps him.”

The teacher participant also discussed the importance of technology in increasing learning and engagement. During the interview, they mentioned the curiosity and interest that their students have for technology:

“They ... love any screen time they can get. I have Ipads, so when they come in after lunch they go straight to Ipads.”

From the interviews, writing seem to be common hurdles that autistic children face. The teacher participant, like the parent participant, also talks about the use of technology in writing tasks:

“We do a lot of writing, I have keyboard type things. Little word processors. But we have Chromebooks in the building, and most kids can do anything on a Chromebook.”

This emphasis on technology to enhance learning experiences for autistic children complements what we know about typical autistic traits. The uncomfortableness that autistic individuals feel

with social interaction is made easier when technology is used to substitute. This technology can make them feel more comfortable while still learning and being exposed to new experiences.

Technology opens up new opportunities for autistic individuals to engage with the world.

Sensory Stimulation:

Another reoccurring theme throughout the interviews relating to increasing autistic child learning and engagement involves the use of sensory stimulation(stim, stims, stimming). Both the parents and the teachers mentioned the benefit that the use of sensory input has on their children's learning, engagement, and enjoyment. One parent described her son's favorite activities for enjoyment:

“Even when he was small ... he always liked, especially when he was little, playing with a lot of sensory input. He liked to swing, he loved the trampoline, he loved to run ... anything with a lot of sensory inputs.”

His sense of enjoyment comes from activities that involve sensory inputs. Not only does he enjoy sensory input, but it also helps him to function in the world. This parent also discusses how this sensory helps to increase his engagement:

“He listens even it doesn't seem like he's listening. A lot of times he'll seem like he's focused on something else, but he's hearing everything, so we do a lot of educational like videos and stuff because he absorbs as he hears –I read out loud to him a lot– So, definitely auditory ... So, I've learned now that if he's messing with something he's still hearing me. He hears stuff that we don't even realize, you know, me and my husband will be talking, and he'll be seemingly watching T.V. It's almost as if he can hear two things at once because he'll be sitting there seemingly sitting there watching T.V., and later he'll bring up, ‘What was that you were talking about, earlier?’ ‘Well, didn't know you were listening!’”

The autistic child's sensory expressions increase his ability to be engaged and to learn, even when that is not the intended outcome. The interview participant's use of storytelling in this section buttresses their amazement that he can be so engaged in something without seeming to paying attention, all because of their sensory stims. The teacher described the benefit of this sensory stimming as well:

"This group's mostly physical ... You notice, I have a lot of stuff, so they can play with stuff. I have a trampoline in here and the swing is huge and the rocking chair. There is just stuff in here for them to play on."

They continued to discuss this by describing how the use of stimming helped to calm a student and engage them in the classroom:

"But I always keep blankets because they like that soft. Bubbles are an awesome autism tool. I had a kid that came in one year who cried the entire first day, and we blew bubbles the entire day."

Hands On Activity:

Hands-on activities were another suggestion that was presented by all participants. Parents primarily mentioned the interest and enjoyment that their children have for hands-on activity:

"He is really good at hands on, he loves projects and stuff like that"

The teacher's comments revolved around engagement and productivity with hands-on activity:

"They like to fiddle with things like squishies or these noodly things that are about the size of a pencil but are rubbery."

"They like to touch things even if they aren't sure if they are supposed to or not."

"You can't always expect them to sit in a designated seat either. They like to move around."

It is notable that both groups commented about using hands-on activity, and it is also interesting they were uniquely focused on different aspects of this theme. Through using hands-on techniques, it is clear from the interviews that autistic children can be more engaged with an activity or subject.

Preparation/Routine:

A final theme of helpfulness that emerged from the interviews was the importance of preparation and routine for success of autistic individuals. All participants mentioned the benefit of preparing their children before starting something new and how keeping a routine helps them to know what to expect, cooperate, and have greater learning and engagement success. A parent commented about how important routine is for their son:

“He loves maps and schedules ... I’ve always said that I feel like I’m Dora the Explorer because he has to know in advance what’s going to happen. So I’m constantly like ‘We’re going to Wal-Mart, then we’re going to this store, and then we’re going to grandma’s house!’ ... And you know we always have our steps. Every day he wakes up and he asks what we’re doing that day and he has to know what we are doing for the rest of the week. And if something, ya know, spontaneous, comes up, that stresses him out ... But ya, he has to know his schedule, he needs his routines. If his routines get broken, it’s upsetting.”

Their emphasis on his routine and schedule shows us the importance of these things in order to be successful. Success in this case means that the child is not feeling overwhelmed or over stimulated. The routine helps him to be prepared for what to expect and be ready for engagement.

When discussing their students’ routines, the teacher commented about how remarkable it is that their students are so in tune with routines:

“They like to have very familiar things. Very familiar things when they are in a new situation. It helps them a lot ... I also have kids that are very set in their routine. They know the routine like they know exactly what we are doing next. They know when they come in in the morning ... we’re gonna eat breakfast ... I have a kid who eats in here because the cafeteria is too busy. They know when he leaves that it’s reading time. They say ‘Oh, so and so left, that means we got to P.E.’ ... they may not be able to read a clock, but they can tell you what time things are. They know exactly.”

So often, autistic individuals are seen as not capable of doing things that neurotypical individuals are capable of. However, their capacity for success greatly increases with routine and preparation. When they are provided the best possible environment for success, their engagement and capacity to learn improves greatly.

Explicit preparation for situations also help their chances of success. Part of learning and engagement success comes from basic social functions that most of us take for granted. Having a foundation of understanding of social cues and politeness is pivotal to successful engagement and learning. Autistic individuals struggle with this concept, so often times preparation and role play can be used as a successful tool to help them interact with the world in successful ways. The teacher told a story about this subject in my interview:

“I had kid years ago, we had red words and green words because he used a lot of red words. Naughty words. He knew they were naughty too, so we would read those and why you don’t use red words. We did one one time about nose picking and how nose picking is gross and you don’t know where your hand’s been. It’s a whole routine of why you don’t do it.”

This story shows us that the child knew that the words he used were naughty words, but he did not have the capacity to understand *why* they were social unacceptable. Breaking it down into red

and green words and reviewing it in a story detached from actual social engagement helped him to better understand the significance of why it is not ok to use naughty words. Likewise, the story about nose-picking is significant because it emphasizes how setting a routine separate from social engagement helps the autistic child understand social politeness separate from social interaction.

Communication:

A common theme from all participants revolving around obstacles to learning and engagement for autistic individuals is the issue of communication. Communication struggles are a common issue among autistic children, and when they aren't able to effectively communicate their thoughts or feelings they can get upset or disengage with the situation. Younger children have more issues with this because they haven't developed as many coping skills as older individuals. A parent expressed to me their experience with their autistic son's communication journey:

“When he was younger we had a lot more problems and I think a lot of it was he didn't know how to communicate, and we hadn't really taught him what to do. You know, when he started to feel overwhelmed... So, once we kinda learned to communicate... that he was able to say, you know, this is too much, and then we could be prepared with, you know, ear buds or some music or give him some time out to go rest, sit in the car or whatever. It got a lot better. We just had to learn to communicate... together how he felt. Because that's a really hard thing for them to recognize how they feel then communicate that to others.”

Their son was unable to communicate his thoughts and feelings effectively, so it led to acting out. They really put emphasis on working together with their child to overcome this and find ways to communicate in order to make every day experiences enjoyable and productive. After a

system was figured out experience and engagement with the world was easier. This is something that children can't typically figure out on their own, so without proper support it can be a major hinderance to success.

The educator also talked with me about communication with students in their classroom. With a number of students in class of varying degrees affectedness, communication is a constant struggle in their classroom. They shared some stories with me during the interview:

“She doesn't use words for communication... They scream, generally because they can't express to you what the problem is. Even if they have words they can't always express to you what the problem is. They can't, they just they can't get the words out. They can't say 'it's too loud, there's too many people here, I don't like this' And they act out based on that, but I find when they start communicating a little more effectively you have less of that. Even if you have a kid who has moments where they go a little crazy on you and can't communicate with you, you can always give them a card like a card to hand off to say 'I've hit my limit now'. I have kids who do that. 'I've hit my limit now, I need to leave, I need to go to a quiet place' Until they master a way to communicate with you they throw fits.”

Communication is a constant battle in their classroom. They are always trying to find better and more effective ways to help their students communicate because if they can't communicate they will disengage and act out. As the educator mentions, tools such as cards and non-verbal cues can be used to help them communicate and stay engaged in a situation.

Sensory Overload:

Another issue that can hinder learning and engagement is sensory overload. As I stated earlier, sensory input can be a useful tool for increasing engagement. However, because autistic individuals are hyper or hypo sensitive to sensory stimulation, unregulated lights, sounds, smells,

and tactile stimulation can cause them to feel extremely overwhelmed very quickly. Both parents and educators discuss sensory overload in their interviews. One parent mentioned specifically how sensory overload often plays a part in her child shutting down or acting out:

“There’s smells, there’s noise ... It’s sensory overwhelming ... I’m guessing it’s just sensory overload because there is so much to see, and I always wonder if there isn’t something about the lighting that triggers something.”

The educator experiences the same issues with their students:

“Things get really overwhelming for them and that’s when they start having their fits. ... A fire drill, those are so loud. In the hallways that we have to grab headphones, and it, just, you know, some kids don’t do the lights ... They just need to detox from all the influx of all the stuff coming at them. It can be so much for them.”

So, while sensory stimulation can be a useful tool for autistic children, it is important to remember that too much unsolicited sensory can be overwhelming and contribute to an overwhelming uncomfortable experience. Knowing about this ahead of time, however, can give the individual or care giver the opportunity to combat the overload with accommodation devices such as headphones or sunglasses.

Parents vs. Educators:

If you look closer into the interviews there subtle differences between the responses of parents and those of the educator. Both groups used narrative to tell stories about their children, but the content of these narratives are slightly different. Both groups also displayed metacommunicative routines when talking about their children. The parents tone of voice and voice change during direct quotation evoked an emotional feeling connected to their child. When one parent recalled a story of when their son was in school:

“When he was in public school we had a problem where he would shake his head. He would sit in his desk and he knew he was supposed to sit still, so he would just shake his head side to side. And his kindergarten teacher we had the worst trouble with because she thought he was being defiant and saying no. She was constantly punishing him for it, and um, he was just stimming, you know, to listen.”

In this story, the interview participant used metacommunicative routines such as voice change, hand motion, and tone that evokes a sympathetic and also disgusted emotional feeling. They put extra emphasis on phrases such as “sit still”, “she thought”, “no”, and “constantly”. This emphasis shows that they are understanding of the requirements that public school puts on students, but also is disgusted that the teacher did not understand the diversity of their students. The interview participant also change their voice, highlighting the innocence, and uses hand gestures to make the motions that her son was making while describing the incident in the story. This adds emphasis to the innocence of his actions, and they use this to further emphasize the absurd reaction that she believed the teacher had to her son.

Throughout the whole interview, this participant consistently uses sympathetic tone while telling stories, direct quoting, and offering suggestions. This consistent use of tone demonstrates the emotional attachment and point of view that a parent has when talking about their child. Parents are always thinking of well-being and happiness for their children. This emerges as sympathetic tone and “mama bear” emphasis.

The teacher also uses similar metacommunicative routines, but in a slightly different execution. They described a narrative about one of their students to me in the interview:

“They don’t know how to interact with their peers, and right now I have one that’s in regular classes, and the peers give him too much lead way. No, if he acts like a jerk and

he needs to be in trouble for it, but they give him too much lead way. No, no, no, no he doesn't deserve it."

This story displayed metacommunicative routines including tone, voice change, and word emphasis as well. The overall tone of this story was directive and strict. They put very staccato emphasis on the words "no", "jerk", "needs", and "deserve". Additionally, their voice changes when direct quoting in the phrase "No, if he acts like a jerk he needs to be in trouble for it". Their voice changes to display a "matter of fact" type of mentality. This educator clearly feels like the students and teachers in the mainstream classes are giving the autistic students too much slack. They sound almost appalled that they do this as well. The emphasis that they place on certain words show that they desire that the autistic students be held to the same standard, socially, as the neurotypical students. It can be inferred from this that by treating them equally, the autistic students will have a better opportunity to learn how to function in the world outside of school. This seems to be a major point of view that emerges based on the metacommunicative repertoire established by the educator during the interview. This harsher and emotionally detached tone is different from the emotionally sympathetic tone of the parents. Although, while they are practically opposite tones, both positions have one thing in common: they clearly want the best success possible for their autistic children. Both parties talk about the same concepts, as described in the overarching themes, however, they use slightly different language to describe it. The parents' word choice primarily uses emotional terms, and the educator's word choice is more clearly academic. The wonderful thing about this phenomenon is that both of these points of view are necessary for an autistic child to grow up ready to function in the world. Both complement each other and contribute to overall success.

Recommendations

It is vital that museums be accessible for all visitors, and creating an autism friendly environment is a great step in this direction. From this research, recommendations can be determined that will help museums to be more accommodating and accessible for those on the autism spectrum. While this is not an all-inclusive list, it is a positive start towards inclusivity and universal design.

1. Sensory Friendly Spaces

The abundance of emphasis on sensory stimulation as both helpful and a hinderance for engagement and enjoyment leads to the need for sensory friendly spaces in museums. Museums often have overwhelming lighting, echoes, and are sometimes very crowded. Additionally, the restrictive rules for touching and body movements in museums can be overwhelming for autistic individuals. Sensory friendly spaces with dimmer lighting, space to lie down, touch, and explore at their own pace in whatever way they need can be an enormously beneficial decompression area.

2. Museum Social Narratives

Routine and preparation is a universal need for autistic individual. Knowing what they will expect when going to a museum will help them to understand the rules, know about areas they might want to avoid, and to be prepared with anything they might need to combat any sensory overload. A social narrative will walk the individual through all major steps of visiting the museum beginning with entering and paying, moving through what to expect in galleries or experiences, the gift shop, and even procedures for leaving. It will also point out any sensory friend spaces and tips for a successful trip.

3. ASD Accessible Field Trips

Providing field trips specifically tailored for children or adults on the autism spectrum can provide a unique opportunity to fully engage them in the museum and give them an experience that they will appreciate and enjoy. Typically, museum field trips are designed with neurotypical visitors in mind, and autistic visitors are able to join as well. However, this problem with this is that autistic visitors will get overwhelmed easily with the large group sizes, unclear direction, and lack of continuity. By designing a program specifically for those on the autism spectrum, care can be taken to meet their unique needs such as sensory friendly environments, routine and preparedness, visual/non-verbal cues, and other unique communication needs.

4. Sensory Bags

Sensory bags are a great tool for autistic museum visitors who want to enjoy the museum. Sensory bags can be available for check out at a welcome desk. They can include objects such as sunglasses, headphones, fidget objects, communication cards, and even a social narrative of the museum. This gives the visitor tools that they can use to enjoy the museum and combat the overwhelming feelings that can arise in a museum environment.

5. Museum Exploration Backpacks

Having an option for visitors to connect with the museum collection in new and interactive ways is beneficial for both autistic and neurotypical visitors, especially children. Museum exploration backpacks are a tool that help visitors to make connections within the collection. Many autistic visitors have trouble staying engaged in something without direction or tactile activity. This exploration backpack can contain objects such as a magnifying glass, scavenger hunt and exploration cards to find and explore objects. For example, “Look for this painting, then INSPECT it to find a CAT. Can you find it?” This provides a hands on interactive activity to accompany the museum visit, and would

be greatly beneficial for all museum visitors, but especially children and autistic individuals.

Conclusion

Through this qualitative research, overall, the findings from my interview analysis support what the literature provides and what other museums I researched are currently implementing to support autistic individuals. There is a slight difference in perspective in parents versus educators, but in general, the accommodations and struggles mentioned by the interview participants are universally applicable for most individuals on the autism spectrum. The limitation of sample variety should be taken into consideration with the results, but even with this limitation, a strong result is revealed in favor of the accommodations and struggles mentioned. Through thematic grouping and discourse analysis, clear direction can be determined that can be used by organizations and individuals who wish to implement universally design procedures and programs that open more possibilities for autistic individuals to engage with and experience the world.

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Appendix B: Gilcrease Autism Field Trip Program

Program Title	Accessible Field Trips
Program length	1.5 hours (45 minutes gallery, 45 minutes art activity)
Primary Audience	Students on the autism spectrum at local public schools
Standards	Program meets an array of standards for art and process and learning skills for grades K-12. An exhaustive list is available upon request
Objectives	<ul style="list-style-type: none"> • Participants will use social skills while exploring the museum • Participants will explore art using sensory integration • Participants will experiment with art medium
Program Description	<ul style="list-style-type: none"> • Start in Kid's Site circle on floor – Hello/getting to know you and introduce schedule and visual vocabulary • Tour of Masterworks – using tactile objects to learn about artworks and role play activities • Art activity in CLC painting landscapes – paint background(habitat) and then use stamps for animals. (or other substituted activity) • Tables arranged parallel with chairs on one side of each table facing inward with an isle in between • Arrange supplies in buffet using universal design(pictures with words) away from work tables • Use visual step by step instructions to show students what to do • Use video showing step by step instructions to class before beginning • Call students to select their supplies when needed • Walk around and help students as need • Make sure to redirect students who are not on task – giving them a job can help • Return to the Kid's Site to regroup and debrief before dismissal
Materials	<ul style="list-style-type: none"> • Visual vocabulary cards • Visual schedule board • Tactile objects for gallery tour (changes depending on the artworks featured; e.g.: ice, feathers, leaves, jewelry, cloth, etc.) • Art Supplies for activity(can change depending on activity): Paint, stamps, paper, pencils, markers, cups, paper towels
Staffing Ratio	<ul style="list-style-type: none"> • 2 staff members/5 students minimum
Evaluation	<ul style="list-style-type: none"> • Participant Observation • Student work samples • Teacher post-visit surveys

Appendix C: Gilcrease Social Narrative

MY VISIT TO: Gilcrease Museum A SOCIAL NARRATIVE



I am going to the
Gilcrease
Museum!



When I see the Sacred Rain Arrow sculpture I will know I am there.

1

When I enter the museum I will see the guest service desk.



The attendant will give me an admission button.



I will attach it to my clothing and wear it while I am inside the museum.



2



I will see a docent at the information desk.

They will help me find my way.



I can take a map to guide me through the museum.

3

If I keep walking into the museum,
I am in **Helmerich Hall**.



This space is **large** and **open**.
It has art on the walls.
It is **bright** and it **echoes**.
People may be **loud** in here.
I will try to **stay calm** and look at the art.

4

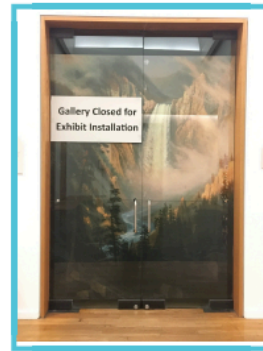
Most galleries are through **glass** doors.



Some may be
down
the **stairs**.

Others may be
closed
temporarily.

I will try to be
flexible and
calm as I
decide which
exhibits to
explore.



5

Inside the galleries the lights are **dim**,
and it is very **quiet**.

I will see many different types of **art**.

I will keep my body **calm**,
move **slowly**,
and **stay with my group**.



If I get **tired** in the
galleries, I can
find a **bench** to
rest on.



6



7



Signs will help me know the rules.



I will follow all the rules of the museum.

In some galleries, a barrier will be in front of the artwork.

This protects the art from harm.

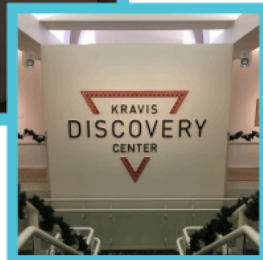
I will not go past this barrier!



Another place I can explore is the Kravis Discovery Center.

A docent will greet me and help me know what to do.

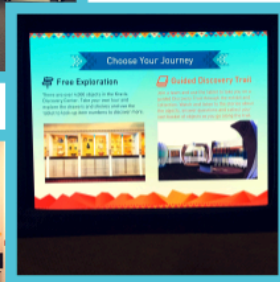
In this room, I can do the Discovery Trail or explore objects in free exploration.



The Kravis Discovery Center is

dim and quiet.

A tablet will help me explore the space.



In the **Visitor's Lounge**,

I will find **SmART Cards**!

SmART Cards help me explore the museum with **trivia** and **puzzles**!

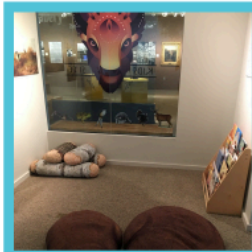


I can take **one** of each SmART card to use in the museum and at home.

If I feel **overwhelmed**, my adults and I can find a **quiet place** to sit and take a break:

The Kid's Site

Visitor's Lounge



Mother's Room

Vista Room



Before I leave the museum, I can visit the **gift shop**! There are lots of **toys** and **gifts** to look at. These are for visitors to buy.

There are many **people**, **lights**, **sights**, and **sounds** in the gift shop.

I will **look** at the things and move **slowly** and **calmly** in the gift shop.



Before I leave I will place my visitor button in the **clear box** next to the door to recycle it.



I had a great visit to **Gilcrease Museum**. I hope I can come back again soon!



GILCREASE
M U S E U M

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