

A Gateway to Inclusion:
Understanding the Structure of Autism Early Open Events in Museums

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Abstract

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The autism population is growing in the United States. Museums can be a resource to families with children with autism by hosting low-stimuli early open or late open events. The purpose of this research is to richly describe and examine the nature of museum-based autism events. Using a case study design, document analysis and semi-structured interviews were conducted at three science-based museum sites on the west coast, gulf coast, and east coast. Results of this study show three distinct staff structures, varying levels of staff accessibility training, and different engagement strategies across sites. Common to all was the tendency to dismiss the effort necessary to get buy-in from all museum departments, the need for funding, and the idea of an advocate or champion within the museum to make an event possible. Perhaps due to the idea of an advocate, museum staff did not think of other participating groups as partners. The implications of this study suggest the resources needed for these events can vary according to the needs and capacity of institutions.

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Chapter 1: Introduction

The number of people with autism spectrum disorder (ASD) is rising; there are now 1 in 68 children with autism (Autism Speaks, 2016). This heterogeneous population exhibits varied symptoms and behaviors, IQ ability, and levels of independence. Dr. Stephen Shore is often quoted as saying: “If you’ve met one person with autism, you’ve met one person with autism” (Lucchetti, 2016, slide 2). Studies show that interventions at a young age for children with autism may lead to significant progress and reduction in some problematic ASD behaviors (Schwartz & Davis, 2014). Even given these wide-ranging differences, three difficulties are widely accepted as diagnostic criteria for Autism Spectrum Disorder (ASD): communication, social skills, and a restricted repertoire of interests and routines (American Psychiatric Association, 2000). Many individuals with autism support an Autistic Culture, and emphasize the genetic basis of neurodiversity, seeing struggles Autistic individuals face through a social model of disability, rather than a medical one (Ne’eman, 2015). Noises, crowds and bright light stimuli can trigger a meltdown for people with autism, and this can be a barrier to going to a bustling environment like a museum.

Autism in the Museum: A Growing Trend

Accessibility is a big concern for many museums today and autism is becoming increasingly mainstream, with an autistic character, Julia (the first permanent character in a decade), introduced on the show Sesame Street in 2017 (AAM, Museums on Call, 2013; Sesame Street and Autism, n.d.). Because of this, autism-friendly programs and events have popped up in a number of institutions. Much of the literature defines “events” as periods of time the museum is open only to families affected by autism and “programs” as more involved class-like guided

experiences, although museum staff often describe both experiences as “program.” Some examples of programs are *Subway Sleuths*, which teaches life skills such as riding the subway to children with special needs, at the Transit Museum in Brooklyn, NY and *Discovery Squad* at the American Museum of Natural History Museum in New York (Stringer, 2013; Varner, 2015). And many art workshops at art museums, including *STRIPES* at the Children’s Museum of the Arts and *Create Ability* at the Museum of Modern Art in NY, can facilitate focused attention, social skills, and fine motor skills (Varner 2015; Different Roads to Learning website, 2015). Although museum programs offer their own benefits, museums with little to no accessibility initiatives may prefer an early or late open event, which Lisa Jo Rudy claims to be easy to host and a “good start” (“Museum Events for People with Autism,” blog, Autism in the Museum, n.d.). This effort may be because events are easier to take on; Rudy, writer and autism inclusion consultant, claims that events “intended exclusively for families and/or individuals with autism are relatively easy to create, seem to require no long term commitment, and are well-received by the community” (“Museum Events for People with Autism,” Blog Autism in the Museum, n.d.).

Early Open events allow families with children with autism to come to the museum in a subdued environment at low cost and with trained staff. This creates an opportunity for kids with autism to practice and generalize social skills in the museum context, motivated by the fun, hands-on experience and perhaps in-depth content in their interest area offered by a museum (Gaffken, Shannon, Maunder, & Adorno, 2011; Mulligan, Steele-Driscoll, & Townsend, 2013). Another study of visitor outcomes is Hastings, Burgess, Feehan, Kawooya, & Deng’s examination of the experiences and learning for visitors with autism using Falk and Dierking’s Contextual Model of Learning (2016). But no substantial literature reviews the structure of these museum programs and if that structure impacts how well these events serve this population.

Though some literature examines participant experience (Mulligan, 2013) and some guidebooks have been designed for museums thinking about adding an autism event or program (Rudy, 2010; Stringer, 2013; Museum Access Consortium, 2015), almost no literature exists on museum implementation, organization, training for, and maintenance of autism events and programs. AAM (2013) has set the expectation that museums catering to audiences with autism “train their staff to understand what to expect, how to react and what community resources are available to help these visitors” (p. 3). Although some attempts provide support through guides created by and for museums, no standard or clear process exists for training staff and implementing an autism event in a museum. This study examines the precise training required and infrastructure involved in starting and running an autism early-open event at a museum with no existing offering for families with children with autism.

Purpose and Research Questions

The purpose of this research study is to richly describe and examine the nature of museum-based autism events and share the characteristics of running such an event with the museum community. The study was guided by five research questions:

- 1) What was the impetus behind offering museum-based autism events?
- 2) What does it take to sustain autism events in the museum?
- 3) What is the nature of museum-based autism events?
- 4) What kind of training do staff receive, and how valuable do the staff find that training to be?
- 5) What resources, if any, do museums look to as guides or models for building these events?

Significance

For museums and museum professionals considering whether to implement an autism event, detailed information about the infrastructural support required is key. Because of increased professional understanding of autism events at museums, staff likely will be more efficient and effective and so participating families with children with autism will also benefit. Other stakeholders include board members and potential donors, who will be able to better decide how to fund museum work most effectively. And the wider community of the museum running an autism event could also benefit because museum exhibits and programs designed to accommodate visitors with disabilities create increased learning opportunities that benefit all visitors, including those without disability (Reich et al., 2014).

Chapter 2: Literature Review

Accessibility and inclusion are big concerns for many museums today and common topics at museum conferences (AAM, Museums on Call, 2013; WMA Annual Conference, 2016; AAM Annual Meeting, 2017). The American Alliance of Museums prioritizes “a commitment to providing the public with physical and intellectual access to the museum and its resources” as a core standard of museums and states a requirement that “programs are accessible and encourage participation of the widest possible audience consistent with its mission and resources” (para 2, para 13) in the Code of Ethics (AAM, Characteristics of Excellence, “Public Trust and Accountability”, 2017 and AAM, Code of Ethics, “programs”, amended 2000). Because of this, and in reaction to the rise of autism rates in our population, autism-friendly and sensory-sensitive events and programs have popped up in a number of museums across the country. Though abundant medical literature covers autism research, behavioral therapy, treatment techniques, and the challenges associated with various forms of public schooling for children on the autism spectrum, little of it is relevant for museum events or programs for people with autism.

The medical model of disability tends to focus on the symptoms and intensive interventions, which oftentimes ignores the individual. More relevant is the social model of disability that looks at the individual and the elements of his or her social context that are disabling. This chapter reviews relevant research from three bodies of literature to inform our understanding of museum-based autism events and programs:

- (1) Autism advocacy and education;
- (2) Museums and accessibility;
- (3) Disability-focused initiatives in museums;
- (4) Autism-based events and programs in museums;

Autism Advocacy and Education

Two prevailing camps lead in autism advocacy. One side focuses on making children with autism adapt to social norms and expectations while scientists search for a cure. Some of this rhetoric is drawn from a foundational study by Lovaas (1987), who claimed that after 2 or more years of behavior therapy young children with autism to be indistinguishable from their typically developing peers. Autism Speaks is a prominent national organization that raises funds for research for a cure and early diagnosis. Much scientific literature focuses on young children with autism, because that early development period is seen to be the most critical for effecting change and providing appropriate support through behavioral, environmental, or pharmaceutical therapies (Schwartz & Davis, 2014; Jordan, Jones, & Murray, 1998).

The other camp advocates accepting an Autistic culture and pushes back against social constructions of disability. Much of this perspective stems from the establishment of cultural Autreats and the internet group “Wrong Planet” in the early 1990s (Bagatell, 2010; Silberman, 2015). A more radical movement from this camp was a counter-campaign against New York University’s Child Study Center ransom-note style marketing campaign that victimized people with autism in 2007 (Silberman, 2015). In addition, some accusatory blogs (Vigellas, 2013) and articles featured in Forbes (Willingham, 2013) and the New York Times (Perry, 2015) focused on the priorities of organizations such as Autism Speaks. For example Amy Sequenzia, a woman with autism, claims that Autism Speaks and those who support it send a damaging message about people with autism:

“They don’t know, or refuse to acknowledge, that the message they are supporting is that society should fear and segregate their children; they don’t know, or refuse to acknowledge, that all the money raised will not be used to help their children with education, services or accommodations that can make navigate the world a little easier for their children; they don’t know, or refuse to acknowledge, that a

lot of the money is used to advertise their children as burdens, as people society should shun, isolate and eventually eliminate” (2016, para 6).

It seems that in practice, most parents of children with autism choose to combine adaptive therapies with accepting and advocating for an Autistic culture.

People in both camps may choose to push for a variety of inclusive or self-contained classrooms and learning activities for their child. Some believe inclusive classrooms help students with autism learn to mimic and interact with typically developing peers, and de-stigmatize autism (Schwartz & Davis, 2013). Evidence of this practice is classroom intervention project DATA (Developmentally Appropriate Treatment for Autism), developed by the Haring Center at the University of Washington, Seattle, which brings preschool and toddler aged children with autism and their peers together for half the day and supports students with autism using focused behavioral intervention for the other half of the day (Forster, 2016).

Some believe self-contained classrooms provide one-on-one attention and freedom for students to be themselves without judgment, though after an analysis of relevant studies, Causton-Theoharis, Theoharis, Orsati, and Cossier (2011) cast some doubt that this practice is effective 100% of the time. Regardless of which camp the parent and child adhere to, because of difficulty with social interactions, children with autism are more susceptible to being victims of bullying in school (Khemka, Hickson, & Mallory, 2016), face more risk of anxiety and depression in adolescence (Kasari, Locke, Gulsrud, & Rotheram-Fuller, 2010; Volkmar, 2014), and attend fewer arts and cultural activities than their typically developing peers (Rudy, 2010).

The divide is complex and may involve debates between parents and children with autism, different priorities for different socio economic and cultural groups, and may change over multiple contexts. One area where some of these divides is clear is the debate between

person-first or identity-first language (Liebowitz, 2015). Liebowitz claims that many people use person-first language because they consider it to be the most respectful way to refer to someone with a disability. However, she argues that identity first language, “is founded upon the idea of the social model of disability” which positions society’s negative view of disability as the impairing element (para 6). Sequenzia claims in “Person First Language and Ableism” that person first can be a choice for a disabled person to make, but is ableist when imposed on others (n.d.). In contrast, Art Beyond Sight’s guidelines in “What Museum Front Line Staff Need to Know” emphasize the need to use person- first language in order to prioritize the individual, because their disability “is not the primary, defining characteristic of an individual, rather just one of several aspects of the whole person” (2014, para 2). The literature on person first and identity first language seems to suggest that the divide aligns with the medical and social models of disability, where in the medical model language is used to actively humanize and prioritize the individual over their disability and in the social model language is used to attempt to reclaim disability as a neutral or positive concept.

Museums can be a great space to offer both inclusive and self-contained activities for people with autism. Many sources agree that children and adults with autism thrive with consistent schedules and routines and visiting a museum has the potential to be a negative experience when it doesn’t adhere to such routines. In response to this, some events, such as the Smithsonian *Mornings at the Museum* were designed in partnership with advisory committees comprised of museum educators, exhibit designers, professionals who work with children with cognitive or sensory processing disabilities, parents, and self-advocates, (Smithsonian, n.d.). Blogs, museum-based articles, and some studies argue there can be benefit for a family with a child with autism in a trip to a museum event. Rudy (2010), author of *Get Out, Explore, and*

Have Fun! argues that a visit to a museum is an essential part of a child's experience: "getting out into the real world and participating in community activities may be even more important to your child's future (and yours) than trying yet another therapeutic avenue" (p. 16). She supports her point with the strong emphasis students with autism have on visual, verbal, and social processing skills to the detriment of any arts, cultural, and multi-sensory learning activities expected in a typical school experience. Rudy also emphasizes the benefit of a museum visit for a parent of a child with autism.

Pirri, Cohn, & Orsmond, (2016) found that parents of children with autism complete an activity analysis to consider environmental factors and their child's impairments before deciding whether their child is ready to visit a museum, continuously developing strategies to enable a visit. Some environmental barriers parents consider are past negative experiences, overcrowding, lines, sensory stimuli, and a "lack of feelings of inclusivity" (Piri 2016, p. 23; Mulligan et. al. 2014; Rudy, 2010). Antonetti and Fletcher (2016) found that parents of children with autism reported experiencing three times as many negative emotions associated with museum activities in an art museum as parents with typically developing children. Similarly, Smith et al. (2014) argue that parents of children with autism face more stress, depression, and stigma than parents of children with other kinds of disability.

The multitude of studies in the literature show social skills interventions for children and adolescents with autism are a priority (Walton & Ingersoll, 2012; Laugeson& Ellingsen, 2014). Difficulty picking up on social cues is a very common characteristic of a person with autism (Gonzalez, Cassel, & Boutot, 2016), and this can have a very negative impact during adolescence (Volkmar, 2014). In addition, generalizing, or applying social skills in a different context, is difficult for children with autism. Successful social skill intervention techniques include:

teaching critical thinking, practicing skills in role-play or hypothetical situations, and cognitive behavioral therapy (Danial & Wood, 2013; Khemka et al. 2016,). There is not one social skills intervention that seems to work more effectively and consistently than others.

A common claim on museum websites and in some literature is that museum visits are inherently good practice for social skills—visitors are in a safe, low-stimuli environment with others who have shared interests and are non-judgemental of stimming or autistic behaviors (Mulligan, 2013; Stringer, 2013). The museum offers a new context where students may practice generalizing learned social skills. Stringer et al. (2013) claim that for some visitors with disabilities, “while educational aspects are integral to museum field trips, social and life skills are also important. Interacting with tour guides and docents and also other visitors at museums can help with these benchmarks for students” (p.142).

The subject matter on display may also have positive motivating effects on visitors with autism who may have narrow, passionate interests. Some claim that object-based museums are in a unique position to benefit children with autism who may have a narrow field of interests (Mulligan, Steele-Driscoll & Townsend 2013; Stringer, 2013). Rudy (2010) claims that the hands-on nature and topical subjects of science museums make them particularly good for visitors with autism as these museums “have begun to realize that they’ve always embraced people with autism— and many are making a deliberate effort to reach out to parents, provide supports, and generally make themselves available to the autism community” (p. 16). And some studies find social skills practice in a new context to be a benefit of museum events and programs (Gaffken, 2013; Mulligan, Steele-Driscoll & Townsend, 2013). Stringer also claims art programs at museums for people with autism can improve social skills (2013). Gaffken found that even without a specialized event or program, young people with autism show an increase in

leadership and independence as well as some social behaviors when visiting a museum, even if the museum is not relevant to their interest. However, Gaffken designed her study to be quantitative but had a very small sample from which to draw conclusions. Overall, museum visits seem to be positive and enriching experiences for visitors with autism, for social skills practice and because of visitor interest in museum contents.

Museums and Accessibility

Museums, charged with holding collections in the public trust, strive to be accessible to all members of the public. In 1990, in the wake of the federal disability access requirements created by the Americans with Disabilities Act (ADA), the American Alliance of Museums created a 12-step guide to creating an accessible experience, titled, “Everyone’s Welcome.” McMillen (2012) did a study of a midwestern contemporary art museum, using this guide as a rubric to assess the museum’s current offerings. It fell short. An assessment of 14 mid-atlantic museum websites shows violations with Section 508 guidelines for accessible web design found in the U.S. Rehabilitation Act (Langa, Hillsgrove, Matthai, Knauff, Corpuz, Eaton, . . . Brockmeyer, 2012). Much of the literature on museum accessibility has to do with satisfying the governmental ADA requirements for physical (often wheelchair) access to entrances and bathrooms, with little effort to make exhibits or content accessible.

Reich et al. (2014) claim successfully inclusive museums should address issues of physical, cognitive, and social accessibility. Literature dealing with the nature of the museum experience for visitors, often centers around a particular type of disability or visitor group. There are a fair number of studies, articles, and active workshops on making museums accessible for people with low or no vision, often rallying under the “Art Beyond Sight” initiative started in 1987 by Elisabeth Salzhauer Axel. This body of literature emphasizes the need for staff to be

trained, collections made accessible in innovative ways (through smell, touch, verbal description), and respect to be saturated in the way these visitors are welcomed into the museum, with text-translatable and easy to navigate websites, clear description of physical entrance, exit and transport, high-contrast and large print signage, and in-person interactions.

Disability-Focused Initiatives in Museums

Museums and exhibits focused exclusively on disability

As for disability as content in museums, University of Leicester professor and author, Richard Sandell brings attention to what museums in the United Kingdom have been doing to highlight disability (Sandell, Nightingale, 2013). However, there are not many studies of disability representation in museums in the United States, and the handful of museums focused on disability seem to be geared toward abled visitors, offering little to no programming or accommodation for disabled visitors, and drawing no attention to autism events or programs on their websites.

There are a few specialty exhibits focused on autism, and museums focused on disability. In Spain, MEDIATE (A Multisensory Environment Design for an Interface between Autistic and Typical Expressiveness) is an attempt to create an interactive space with real time stimuli for visitors with autism (Parés, et.al, 2005). Sensorium was an exhibit designed by Leigh White in 2014 to help visitors focus on one of the seven senses at a time, through interactive elements meant to inspire conversation on people's unique sensory processing. Other exhibits like the website "Every Body: An Artifact history of disability in America" from the Smithsonian Museum of American History will focus on the subject of disability but with little or no description of access programming. The Disability History Museum's goals for its library show a clear preference for high educated and abled people. Block claims the aim of the online library

collection is to provide “easy access to an array of materials that would help point researchers, reference librarians, the general public, educators and students, curators of museums and archivists, indeed professionals of many kinds, as well as advocates and community activists, toward recognizing the rich array of sources” of disability history (2007). Although the Disability History Museum in Conway MA, Museum of disABILITY History in Buffalo, NY and the Museum of Special Art in Bothell, WA focus on disability, only the Museum of Special Art has access programming- an all-inclusive arts workshop (Walker, 2014). An art workshop can be a very powerful tool for a visitor with autism, as Baldino (2014) wrote in the Talahassee Democrat, “For artists with autism, some of whom are non-verbal and most unable to easily interact, art is an extraordinary vehicle of communication” (para 6). From the available literature, it seems the others place more focus on describing disability to those visitors who do not have disability than on accommodating those who do.

Inclusion

Inclusion has a number of different interpretations. Sometimes it covers incorporating visitors with disabilities and autism, sometimes it does not. For example, in 2016 the Association of Art Museum Directors published a compendium of 51 examples of diversity and inclusion in a document titled, “Next Practices in Diversity and Inclusion” and not one mentioned the word autism. Kulik and Fletcher found that some museum staff were divided about whether or not to pursue an autism initiative (2016).

However, there are a few notable blogs and museum professionals who have written specifically on museums and autism programs. *Autism in Museums* by Rudy, *Incluseum* based in Seattle, WA and *Think Inclusive* based in Mareitta, GA. These sources generally praise what museums are currently doing with autism events and programs, but also push for more actions

toward full access. And a few museums are working to create opportunities for adults with autism to work (Mulhearn, 2014; Museum Access Consortium, 2016; and “Supporting Transitions: Cultural Organization, Information Resource,” 2016). Some autism-related posts make appearances in blogs like *Museum 2.0*, *The future of Museums*, *Sally Fort*, and from the UK, *Tincture of Museum*. Network organizations like the Association of Museum Art directors and ASTC occasionally post articles from researchers and advocates and some individual museums like the Museum of Natural Sciences of Drexel University. These noteworthy blogs and forums represent a wider support from the autism and museum communities for events, programs, and supports for visitors with autism at museums.

Conferences Supporting Inclusion and Diversity Initiatives in Museums

Leist (2015) in her paper *Visitor Voices*, details some access-focused conferences. At the North Carolina Museum of Natural Sciences, Yirka, (2013) created a museum-based conference partnering with SAS institute called STEM Career Showcase for students with Disabilities. Hoppe and Lynch (2016) claim “VSA Ohio, Columbus Museum of Art, and many others will host the [September] 2016 Arts and Autism Conference: Creating, Learning, Living” (para 4) with a focus on how to make museums and other cultural spaces more welcoming to people with autism and their families. However, no session listed in the conference agenda focused on museums, and the Columbus Museum of Art did not feature any result for the term “autism” through its website search in December 2016 (Sessions: Arts Autism Conference, 2016). Additionally, the VSA Ohio has officially postponed the 2017 conference (VSA Ohio: the State Organization on Arts and Disability, 2017). And an exemplar for the field, the American Alliance of Museums, focused its annual meeting on the experiences of visitors with hearing disabilities, dementia, and autism (Leist, 2015) and in 2017 the theme was “Gateways for

Understanding: Diversity, Equity, Accessibility, and Inclusion in Museums” (AAM “2017 Annual Meeting theme”, 2016). At this conference, of the 23 sessions focused on inclusion, access, and disability, none mentioned autism in the title (Conference schedule, 2017).

Additionally, the (Lesbian, Gay, Bisexual, Transgender, Queer) *LGBTQ Welcoming Guidelines*, a transferrable and museum-comprehensive inclusion guidebook, was launched in a dedicated conference session (Gavigan, 2017). Additionally, the UK journal and research network will be holding the 10th annual Inclusive Museum conference in 2017. All these conferences show there is support and esteem for accessibility initiatives, but there does not seem to be much detailed actionable information in literature resulting from these conferences.

Museum-Based Autism Events and Programs

Many museums are offering both autism-only early or late open events and inclusive programs for families with children with autism. There is some inherent confusion in the literature, as museums use the term “program” to denote anything facilitated, which includes events. For example, Cho and Jolley claim that “over 30 museums to date have developed special programs to engage individuals with Autism” but it is unclear what they mean by the term “program” (2016).

Rudy (2010) distinguishes events from programs. An event is a period of time when the museum is open for only parents or caretakers with children with autism. For example, early open events allow families with children with autism to come to the museum in a subdued environment at low cost, with trained staff. Gaffken, Shannon, Maunder & Adorno (2013) found this kind of event creates an opportunity for kids with autism to practice and generalize social skills in the museum context. Additionally, Mulligan, Steele-Driscoll & Townsend (2013) observed that children with autism may be motivated by the fun, hands-on experience and

perhaps in-depth content in their interest area offered by a museum. Though there may be some optional interaction or tour, visitors are able to independently explore the museum with dampened sensory stimuli.

A program, on the other hand, is more structured, and may include some art workshops as well as a class-like experience, like the Subway Sleuths program at the Transit Museum in Brooklyn. Additionally, some literature describes museums that have created supports for children and teens with autism in general-offer programs, camps, and volunteer positions, such as Kit Wilhite, director of Youth and Family Programs at the Science Museum of Minnesota, who favors integrated programs and works with her local Autism Society for staff training (Rudy, 2010).

Only a few studies deeply examine autism events and programs at museums. Many of these are theses and dissertations for Masters Museum Studies candidates. Varner (2015) created an overview of notable events and programs. Freed-Brown (2010) examined many programs with attention to educational techniques in an informal learning environment. Tyler (2015) examined the methods museums use to accommodate visitors with autism through a case-study approach. Mulligan et al. (2013) used a mixed method approach of qualitative and quantitative data collection to study the event “Explore Our Way” offered at the Children’s Museum of New Hampshire. The event was developed collaboratively by taking on suggestions from adults with autism, like “structured or scripted social activities, minimizing crowds, available quiet spaces, and providing alternative modes of communication such as pictures” with the aim to create opportunities so families could gain transferable skills for visiting community programs during regular hours (p. 309, 311). Mulligan et al. (2013) claim there is little literature on the “effectiveness of intervention strategies” for promoting successful museum learning,

participation, and enjoyment specifically for visitors with autism (p. 310). The focus of this scholarship comes often from graduate students, rather than across the field.

Stringer (2014) published the book *Programming for People with Special Needs: A Guide for Museums and Historic Sites* and presented a talk with descriptions of programs and strategies for small museums and historic sites to better accommodate autism programming.

After examining the number and types of autism events at museums on the east coast, west coast, and central USA, (Salthouse, C., 2017) it became clear that the majority of events and programs are located on the East coast, specifically New York. Based on this search, the majority of autism events or programs appear in science and natural history museums, art museums, and children's museums. Overall, museums that have programs also have events, but not many museums that events also have programs. In the case of the Pacific Science Center, creating support materials and hosting an event was the first part of a multi-step access initiative, which suggests other museums may begin with an event before branching into a program.

Passive Support Through Website Offerings

Many museums with autism events and programs offer resources on their websites, and some museums without an autism event or program, like the 9-11 Memorial Museum, provide this kind of passive support, such as online visual maps and social narratives to introduce kids to the museum's rules before visiting ("Visitors on the Autism Spectrum," 2016). Some guides created for museums on how to start an autism initiative suggest creating these kind of resources, but do not specify researched standards, leaving room for museums to make an informal approximation (Langa, Monaco, Subramaniam, Jaeger, Shanahan, & Ziebarth, 2013). Encouragingly there are museums which have worked with experts to create these materials like the Boston Children's museum with Boston University College of Health and Rehabilitation

Sciences. And in 2011, the Smithsonian (2011) partnered with the University of Maryland for the project: The Museum Experience of Children with Autism and Their Families: Improving Access through Web and Electronic Resources, to evaluate web resources (Langa, Monaco, Subramaniam, Jaeger, Shanahan, & Ziebarth, 2013). Social Narratives are brief, descriptive stories with visuals that can be personalized to the visitor and prepare them for what to expect during a museum visit.

From the description and appearance of some of these early open events, it would seem that training staff in accessibility is not required. At all early and late open events, the stimuli are dimmed, doors opened for a limited number of visitors to reduce crowds, and exhibit interpretation is seemingly up to the families visiting with children with autism. Some institutions, like children's museums or science centers, may already have exhibits designed for a broad range of abilities, developmental levels, and multi-sensory exploration. Because of the range in ages and parenting cultures and the staff training that anticipates these factors, there may be a false assumption that specific training for staff about interacting with visitors with autism is not necessary. However, much evidence shows that training is considered by visitors, museums, and funders, to be an essential component in an early open autism event.

Need for Training

One area of literature gives some insight into the museum strategy to create and host an autism event- staff training. There are a few studies and guides based on low-no vision initiatives which emphasize the need for and type of training for museums hosting these events and programs. For example, Levent and Reich (2013) recommend a collaborative approach to training, but there is no evidence that Art Beyond Sight materials inform museums starting autism initiatives. Visitors want to know that staff are trained about autism and know some

strategies to best support a visitor with autism. A large number of museums that host autism focused events advertise the presence of a therapist or when a museum has given staff training. Some museums advertise trained staff at autism events on their websites, like the Henry Ford Museum in Michigan which “participated in Michigan Autism Safety Training (MAST) provided by the Autism Alliance of Michigan to better understand the characteristics of autism and how to recognize and communicate with someone with autism” and the Center for Puppetry Arts in Georgia where visitors will be “welcomed by staff members who have been trained in interactions with patrons with ASD” (Ford Museum, “Sensory Friendly Saturdays,” 2016 and Center for Puppetry Arts, “Sensory Friendly Programming” 2016). Rudy (2010) remarks on the welcoming effect this has, claiming “There are even a few children’s museums that have embraced families with autism to the point where they have trained their staff to support the needs of kids on the spectrum” (p.108). Dillon et al. (2012) found that parents, “articulated a feeling that staff training was too rigid and not broad enough to provide staff with an in-depth insight into autism, with some staff criticized for adopting a “one size fits all” approach to support,” which failed to meet the individual needs of their child.

From the museum community, staff accessibility training is an important factor. Reich et al. (2014) claim the barrier of a person’s social inclusion is that “not all staff members are well trained with regards to how to interact with people with disabilities,” which seems one of the easiest to resolve of accessibility barriers (p. 283). An AAM report (2013), *Museums on Call*, claims that museums catering to this audience, “train their staff to understand what to expect, how to react and what community resources are available to help these visitors” (p. 3). Stringer et al. (2013) emphasize the value both museum professionals and visitors find in staff inclusivity training which produces a more welcoming atmosphere as “one of the most important and

universal elements when addressing the needs of people with disabilities” (p. 141).

The Play For All Initiative at the Chicago Children’s museum, though not focused on children with disabilities, has a pre-visit story and “disability-specific trainings, such as autism awareness” which Golden & Walsh (2013) claim is not only central to the program’s success, but also “a vital contributor to a general culture change within Chicago Children’s Museum” and (p. 339, p.340). Additionally, these initial trainings led to more collaboration and more internally based training: “the museum continues to rely on partners and experts in the field to provide more specialized training, members of the Play For All team now feel qualified to offer many of their own basic training sessions for staff. One of the museum’s most powerful trainings is a panel session made up of its own staff and volunteers with disabilities” (p. 339). From the area of vision accessibility, Art Beyond Sight founder Elizabeth Axel identifies two potential barriers staff accessibility training can fix: Staff lack of knowledge and experience with the visitors with disability and staff unawareness of tools available for providing access to museum facilities and exhibits (Paulette Beete, Touch and See: Accessibility for People with Vision Impairments at the Art Institute of Chicago, 2015).

Types of Staff Training

There are a few staff training approaches open to museums. As far back as 1990, a 9 step training protocol for accessibility was created specifically for museums. Staff training was a prioritized and required step, which some museums still fail to fulfil (McMillen, 2012). Even museums that provide some kind of accessibility training may not have ideal saturation.

According to a conversation transcript from the 25th anniversary of the Americans with Disabilities Act at the Guggenheim, the Metropolitan Museum of Art, for example, offers monthly trainings to visitor services, volunteers, security guards, but accessibility training is not

museum-wide (Dover, 2015). Some institutions that seem to have staff training situations like the Guggenheim, working toward universal access, or MoMA, with 15 years of staff training, and an Accessibility Task Force to evaluate how well it works, continuously work toward improvement (Dover, 2015). Reich supports this in the literature with the assertion that museums that work toward inclusion practices are *continuously* working toward this goal, and it must be an on-going, and integral process (Reich et al., 2014).

Museums sometimes partner with learning institutions to create training guides for teachers or staff, and this is encouraged in the literature. The Kids like You, Kids like Me annual teacher training program was created by the Siskin Children's Institute and the Children's Discovery Museum in Chattanooga, Tennessee (Mickel & Griffin, 2007). The Boston Children's Museum and the Chicago Children's Museum collaborated to create a staff training curriculum for working with families in 2012 which is freely available online. Though not accessibility-focused, this collaborative effort establishes some standards across museums and does address the Play for All access event in these training materials.

Sometimes training will happen from within the museum by a staff member or members who have prior experience working with people with disability. This seems to range from informal, impromptu trainings to regular in-depth all-staff accessibility trainings. After a Train the Trainer session, a staff member with extensive background working with people with disability instigated many informal mini-training sessions during morning meetings with staff which included teens and volunteers, many who had started after or missed the initial accessibility staff training from an outside organization. Meredith Gregory, head of the access department at the New York Transit Museum, conducts quarterly training sessions for all staff and arranges speakers "with a range of disabilities and family members of people with autism to

lead trainings to create overall disability awareness and sensitivity” (Personal Communication, May 28, 2017). Gregory trains educators as part of onboarding and there are educator trainings in the fall and summer specifically on “teaching techniques for people with disabilities including autism, to learn how to structure a tour, use questioning techniques, and use visual and sensory supports” (Personal Communication, May 28, 2017). Core access educators get one-on-one training with Gregory as well as training from outside specialists (Personal Communication, May 28, 2017).

Another approach is at the Whitney Art Museum in New York. The Coordinator of Access and Community Programs claims that all staff accessibility trainings occur quarterly, with additional onboarding accessibility training for new staff and volunteers as well as supplemental accessibility training specific to different forms of disability the museum accommodates (Personal Communication, April 2016). These training sessions are a mix of in-house training, partnering with the Museum Access Consortium, and partnering with other advocacy groups.

Training may come from an outside organization focused solely on providing accessibility training, like Partners for Youth with Disability. Very Special Arts Ohio (VSAO), an affiliate of the VSA network which is a program of the John F. Kennedy Center for the Performing Arts, is one such group that provides multiple trainings for large numbers of people: “recently, VSAO has begun providing accessibility trainings for staff and volunteers at cultural institutions. In June, VSAO presented sessions on Accessibility 101 and Autism Awareness to over 100 staff and docents at CMA” (2012). At the Intrepid Sea, Air and Space Museum, Dr. Jacqueline Kelleher and staff from Autism Friendly Spaces served as independent consultants and program evaluators, and conducted training sessions for front of house staff, two sessions for

museum educators, and a session for security in 2013 funded by Autism Speaks (Final Report, 2013). The Intrepid: Air, Sea and Space Museum also established a Parent Advisory Council to work as partners with the museum. In New York, the Museums Access Consortium (MAC) is an association that includes museum professionals interested in access and actively shares resources and trainings. Other options include professional development workshop sessions. Additional methods, used with some success for staff training and developing programs for people with low or no vision, include interviews and focus groups (Levens & Reich, 2013).

Partnerships

There seems to be much more activity about access in areas where there is a strong access partner organization presence like Museum Access Consortium (MAC) or the Chicago Cultural Accessibility Consortium (CCAC). One unique example of partnership work with museums is the “My Turn” community, which combines efforts from different museums in Michigan to create a centralized calendar for early openings at these various sites. Christine Reich, Museum of Science, Boston, surveyed literature on institutional change and found these common key elements: Shared inclusive cultures, values, and beliefs facilitate change when present in an organization, and impede change when absent (Reich, Jackson, Hein, McQuillan & Hargreaves, 2014).

On a slightly different track, the Libraries of Illinois, has recieved grant funding for a 2 year train the trainer program for representatives from 50 libraries in Illinois through a partnership with Dominican University. In this project the Illinois libraries will also be working with Syracuse University on accessible website design through project ENABLE (Targeting Autism, 2016).

Occupational therapists, Robert Ideshi and Ingrid Kanics, have worked with many museums to create inclusive environments and accessible materials for visitors with autism (Leichtman, MS; Palek-Zahn, Tung, Becker; & Jirikowic, 2014). An example of this is the Pacific Science Center partnering with University of Washington Occupational Therapy students to create a sensory guide, two versions of an adventure planner, a visual schedule, and a tip sheet for parents as well as staff training module and information sheet (Leichtman, 2014). A similar partnership exists between Franklin Institute and the occupational therapy program at Temple University in Philadelphia, PA (Who is Educating Whom? 2015).

Grant Funding

One way to assist museums with accessibility initiatives is through funding. Reich et al. (2014) found that the perception of available funding can be a meaningful element to help facilitate institutional change. Early Open events and staff accessibility training are often sponsored by a company grant such as Safeco at the Pacific Science Center. In this case, the grant funding provided accessibility 101 training for all staff with a refresher session a year later, and more intensive autism-focused training (Train the Trainer) for those who run the museum during these program hours. Training was provided by Genelle Thomas, representing Partners for Youth with Disability, an organization that had given accessibility training to representatives from SAFECO's grantees the year before the Pacific Science Center applied for an Early Open grant (unpublished conversation with Grant Writer Lindsay Bailey, 2016). The Intrepid, Air, Sea, and Space Museum also had a training component built into a grant from Autism Speaks (Intrepid Museum Foundation, "Final Report: Autism Speaks", 2013). IMLS is a big supporter of autism events in museums. IMLS supported New Canaan Library for its work with special needs and staff training, and provided a \$81,229 grant in 2010 for the Boston Science Museum in

order to “provide professional development for 45 museum educators to enhance their understanding of Asperger’s Syndrome and Autistic Spectrum Disorders.” And in 2012 IMLS provided \$149,911 of funding for a Changing Attitudes Towards Autism Access (CATAAlysis) partnership initiative by Drexel University’s Academy of Natural Sciences, the Center for Aquatic Sciences at Adventure Aquarium, and Autism Inclusion Resources (Awarded Grants search, 2016). The funding supported developing a “set of staff training programs, digital and hands-on resources and accommodations to help support the inclusion of families with children on the autism spectrum in museum exhibits, programs, and workshops” (Academy of Natural Science web page, 2016).

Museum Guides

There are a few targeted autism program or event guides created by museums or by museum professionals like Stringer et al. (2013), some professional development and consultation available at a local level in select areas like the Museum Access Consortium in New York, and tip guides created by some exemplary programs like the Boston Children’s Museum, and the Intrepid: Sea, Air and Space Museum. On the American Association of Museums website, there first listed resource for ‘Accessibility & Interpretation’ is a 2011 article by Rudy, “Addressing the Needs of Children with Autism,” followed by articles such as “Programming for People with Special Needs” and a link to the Metropolitan Museum of Art’s “Resources for Visitors on the Autism Spectrum” (AAM, Education & Interpretation 2017). There are many guides created by advocates from the autism community that appear in places like NPR: Shots (2013) and on blogs.

For the most part, these guides tend to be brief and very general, with suggestions like, “Get to Know Autism” and “Aim to be Inclusive” (“How to better Welcome families and Young

people with Autism” n.d.). These guides do not address, for example, the best way to accommodate visitors with noisy behaviors and visitors who are sensitive to sound, beyond suggesting a quiet space for meltdowns and free use of noise cancelling headphones (Naudziunas, 2013; Mickel & Griffin, 2007). The Museum Access Consortium also has a guide, but with a bit more detail; specifying the need to select specific dates, create multi modal experiences, visit programs for people with autism, updating and redesigning website, all followed by links to further resources. One guide book, *Room to Grow* by Michelle Lopez and Jennifer Candiano (2012) provides an introduction to autism and relevant learning theories. Rebecca McMillen (2012) examined a Midwestern Contemporary art museum against the guidelines created by Salmen in 1998, which suggests that a museum should create an accessibility statement, establish an accessibility coordinator, work with an advisory council, provide staff training, and evaluate its efforts. Salmen’s guide was intended for general accessibility, not a specific type of autism event (1998).

There are some common traits across both museum-based guides and guides created by people with autism for autism activities in museums. These include the need for staff training, social narratives, partnership with the autism community, and providing a quiet or calm down zone. The similarity of Salmen’s guide to modern autism event guides for museums suggests that these new guides are not sufficiently specific to be useful in building an event.

However, these resources are generally too broad to be useful to a museum looking for a detailed, logistical strategy to start an autism accessibility initiative. Likewise, literature that merely inventories and describes these events fails to examine what elements made it successful. Nothing I have found has mentioned institutional organization for putting on this kind of event, nor the requirements for staff training, necessary facility attributes.

Conclusion

The literature can richly explain facets of how autism affects a child's development and possible treatment paths. And it is clear that the autism community is divided in many ways on what the most appropriate direction for supporting a child with autism is. There is some evidence that museums offer alternatives to structured education in formal schools and the museum environment may be beneficial to families with children on the spectrum by offering free choice learning, depth of a particular subject of interest, and opportunities to practice social skills. Public opinion and Museum conferences, blogs, and AAM reports call for more inclusion. A few in-depth studies provide research and guides give a general direction to museums. But there is little evidence of a standard of best practices or sufficiently detailed guide or criteria for implementing and organizing autism-friendly events or programs within the museum field and this is problematic as more and more museum take on the responsibility of providing resources, programs and events targeted for this population.

Chapter 3: Methods

Purpose and Research Questions

The purpose of this research study is to richly describe and examine the nature of museum-based autism events and share the characteristics of running such an event with the museum community. Five research questions guided the study:

- 1) What was the impetus behind offering museum-based autism events?
- 2) What does it take to sustain autism events in the museum?
- 3) What is the nature of museum-based autism events?
- 4) What kind of training do staff receive, and how valuable do the staff find that training to be?
- 5) What resources, if any, do museums look to as guides or models for building these events?

This study used a case study design, and collected data using semi-structured interviews with museum visitors. This chapter describes the research site, data collection procedures, data analysis procedures, and methodological limitations.

Research Sites

Data were collected from staff at three museums located on the East Coast, West Coast and the Central Gulf Coast of the United States to reflect a range of cultural contexts. Two of the three museums started an autism event and lack prior significant accessibility initiatives, such as Art Beyond Sight tours, before hosting the autism event. This allowed the research to focus in on what resources were needed exclusively for an autism event.

All three sites have a focus on Science Technology Engineering Math (STEM) and two focus on transportation history, areas which Rudy (2013) claims children with autism naturally

gravitate toward. The West Coast Museum is a museum based in the Seattle Center, close to the Space Needle, and art, pop culture, and Children's museums. It has two Imax theaters which show both Hollywood and documentary films, so it attracts tourists. The West Coast Museum started a free monthly two hour autism Early Open Event called *Explorations for All* in 2015, with annual autism events from as early as 2012.

The Gulf Coast Museum is situated in Fort Worth's Cultural District amongst art museums and the Will Rogers Memorial Center. The Gulf Coast Museum also has an Omni theater. They began *Sensory Aware Saturday* autism events in 2013 for a graduate student's capstone project and have since made changes to the structure and time so in 2016, the museum stayed open late rather than opening early. The nature of the event is still within the category of autism only events, whether it is offered early or late. This is an annual event which makes accommodations to the museum atmosphere and brings in various therapists and service groups to market their research or service and answer questions, and sometimes to lead activities for visitors.

The East Coast Museum is an historic aircraft carrier on the shore of Manhattan island in New York, five city blocks from Times Square. This museum hosts a monthly *Early Morning Opening* for children with autism. The Museum Access brochure (n.d.), found on the website, describes the event as a "short interactive [tour] designed for the whole family as well as drop in art and structured play activities." This autism event was one of many Access programs and events created in 2012 as part of a new welcoming initiative after a two year renovation. The *Early Morning Openings* have increased over time from 6 times a year to 8, with new themes and materials for each occurrence.

Sampling Staff

After participating museums agreed, the researcher used a snowball sampling method to include individuals within each institution who were most involved with the design and implementation of the autism event. The researcher made an attempt to include both behind-the-scenes and on-the-floor staff in order to get a complete view of the structure of the event. Participants received an initial email with a brief description of the purpose of this study, the interview process and question guide, and an explanation that their involvement would be completely voluntary and could end at any time. Participants were all connected to the autism event at the participating museum, though they may not have been in the same department or involved with the event at the time of the interview.

Data Collection

The researcher conducted 11 semi-structured interviews with key staff involved in planning, training, and hosting the museum's autism access events or programs. Semi-structured interview questions were crafted to address the study's research questions (see Appendix A). Interviews were conducted between February and April of 2017. The researcher interviewed staff over video call and phone, and each interview took between 25 and 45 minutes. Staff were emailed or called and asked to participate, then they replied to a statement of consent over email. The interviews were recorded on a handheld audio recorder. The researcher transcribed the audio files and when necessary, followed up through email for clarification.

Data Analysis: Transcription

The interviews were recorded during phone or video calls and analyzed using google sheets and NVIVO. Interviews were grouped by museum and data was compared across the three sites as well as within each site. Qualitative data from open-ended questions were analyzed

using an emergent, inductive coding system based around research questions. See Appendix B for the codebook that was used.

Data Analysis: Document Analysis

The researcher asked participating sites to gather and share what relevant documents were available. Suggested documents include: evaluation reports, transcripts or emails describing planning or decisions around the event, any training materials, grant proposals, staff memos, organization charts, records of meetings about the event internally and with partner organizations, and museum marketing materials. The researcher analyzed documents for consistency, breath of topics, audience (visitors or staff), date updated, and ease of access and compared them with related site interview data and across museums. Emergent themes in documents were compared with emergent themes from interviews. The researcher used the main research questions to guide this inquiry.

Ethics

In order to conduct these staff interviews, the researcher had to submit her work to an Institutional Review Board (IRB) at the University of Washington. IRB assures the protection of the rights of human subjects taking part in research. IRB approved this research. The researcher agreed to keep the information gained from the participants' private and confidential and to obtain informed consent from each participant. This study did not reveal staff names and all the interviews were saved on password protected devices and will not be shared publically.

Limitations

Limitations include the number of sites and data possible within the scope of this case study. The researcher approached four institutions and three agreed to participate. Interviews had to be conducted over video-chat or phone which lacks some peripheral information such as the

physical office locations, mood and behavior of larger staff pool, and elements of in-person interviewer and interviewee rapport. Additionally, due to the scope of this research, there are some elements which cannot be addressed or answered, such as the detailed processes involved in getting board and upper-management buy-in or support, the percentage of overall budget such an event requires, and the perception of local advocacy groups or communities with children with autism on museum autism events.

Chapter 4: Results and Discussion

Case Descriptions

The West Coast Museum

This site's first autism events were created to accommodate the local Children's Hospital desire in 2012. There were little to no external funds so the event was not offered regularly or for the public. In 2013, The State University's Occupational Therapy Program worked with the museum to develop a sensory guide and other visit resources. The West Coast Museum's online resources focus on elements of the museum, and support a self-guided experience. In 2015, the museum applied for and received a grant that enabled them to open early on a monthly basis. Built into the Safeco Insurance grant, there was a staff-wide accessibility 101 training from an accessibility training organization focused on youth with disabilities in school settings. The grant allows the West Coast Science Museum to offer their space for free 2 hours before general visitors may arrive, on a Saturday morning every month.

The website describes the event as:

On the second Saturday of each month, through December 2017, all families affected by autism spectrum disorder are invited to [the museum] during a special free morning visit from 8-10 a.m. – before we open to the public. Experience our exhibits without heavy crowds when we have softened general lighting and decreased the noise level and visual stimulation on interactive exhibits wherever possible.

The event is two hours, monthly, free, all buildings are open, and there are interpretive staff at Live Stage, Tide Pool, Planetarium, and butterfly house. There is no pre-registration required for this event, and according to the Summative Evaluation, there are about 25 family groups, or 100 visitors, at each event. A stakeholder handout describes anticipated 300 visitors per month.

The Gulf Coast Museum

This museum's Early Open Event was developed in 2013 by a Graduate Student in the Mind, Brain, and Education program at a local university. This student also produced a social narrative, sensory guide, and staff training for the event. The Gulf Coast museum's resources are mostly logistical and practical in nature, perhaps because the resource table aspect of the Event is a large emphasis. It has since been taken up by the Manager of the Research and Learning Center and hosted yearly, though now is offered in the evening, thanks to a grant from an Aeronautics Corporation. The website describes the event as "an opportunity for families of individuals on the autism spectrum to explore the [museum] in a safe, understanding environment." This event has a strong focus on visiting therapists, limited crowds and stimuli, and initially discounted, now free admission. The current leader for this event expects 2/3rds of the registered participants to attend, and register "a little bit over" 300 people. The 2016 flyer states that the event is limited to "250 guests."

The East Coast Museum

This museum built up an access-focused initiative during a two-year renovation from 2006-2008. A single staff member spearheaded these access efforts and subsequently created the Early Morning Opening in 2011. This event consists of a guided tour through the museum to a hands-on interactive area. There are wait activities, visual vocabularies, social narratives, sensory guides, activity stations, and structured social time with expert guests like a civilian astronaut or museum restoration staff. All the materials were developed by staff at the museum, and most of the trainings are internal. the resources are extensive, including a 22 page social narrative, 5 page grid-structure sensory map, six Visual Vocabularies intended for self-guided visits, online video gallery of the museum, sensory bags which include" noise-reduction headphones and fidgets to

help ease sensory stimulation. The high detail reflects the many components of this event. This event is possible due to a host of small foundations and large corporate or city matching grants. The educator responsible for registration claimed that “because it’s a free program, we definitely over-register. Because we plan for about a 50% drop off. we register 175 people, that probably looks at like about 50 families” and acknowledges that there is increased attendance for popular events that may be repeated on a yearly basis, like the submarine and Concorde.

1) What was the impetus behind offering museum-based autism events?

There are some clear differences in how each site’s event began: to align with a funder’s priorities after sporadic events, as a graduate student’s capstone project, and as a timely new component of a fleshed out accessibility initiative. Common across all these origins is one or more individuals who advocated for such events, and active solicitation of funding for such events.

At the West Coast Museum, the first autism focused events were not open to the entire autism community, instead it was a partnership with the Seattle Children’s Hospital who “had a little bit of money to do something fun for the community they work with, so they came to us and essentially asked if we could do something.” The Foundations Relations officer claimed,

In the past, we had never had funding to do them necessarily so they were cobbled together a little less intentionally. So our goal with this grant was to develop a program that was a little more substantial, that was regular enough for us to learn things about the events and how they were working for families. And have the chance to improve them over time. That was our intent: to be able to offer something more for the spectrum of families in the community who were sensory sensitive- we wanted to be very inclusive, not necessarily requiring that somebody be diagnosed with autism spectrum disorder.

Most interviewed staff had worked in connection with the new, monthly, current iteration of the Early Open which was made possible by a corporate insurance grant. The decision to

pursue a grant for Early Open Events came from discussions about the best way to meet accessibility and inclusion goals of the funder. The Foundation Relations Officer said,

We narrowed down, I mean accessibility and inclusion that's a pretty big idea. So we had lots of conversations about what that meant to them, and what our institution's needs really were in that area and what we thought the community could use and what we thought we could really deliver well.

The Early Open Event at the Gulf Coast Museum was a Graduate Student's unintentional capstone in 2012. She participated in my study, though she has not been employed by the museum. She explained that her graduate program's director had

spent 5 years developing this relationship with [the museum], and they offered this opportunity for us to collaborate with them and I thought it would be truly a tragedy not to take advantage of that, as the first cohort, and because I love the museum so much.

After the student approached the museum with intended research on music therapy with children who are nonverbal, it became clear that would not be feasible at the time, and so the student decided instead to create an Early Open event at the museum. She created pre-visit and post visit materials, created a general information sheet for visitors, brought in a team of occupational therapists to assess the museum and make recommendations for changes the museum could make to its exhibits and environment, such as turning off a hurricane machine, hosted an accessibility training for staff, and visited other museum autism events with the woman who is now Manager of the Science and Learning Center. The first Early Open at the Gulf Coast Museum attracted 150 visitors, according to the Graduate Student's research poster. The Executive Vice President (EVP) of Programming's job at the time of the first Event was to navigate buy-in from across departments and inspire board approval of the idea.

The East Coast Museum's event came into being with a strong, planned out accessibility mandate that emerged during a major museum planning effort between 2006-2008:

During that time, there was a reboot in the exhibition design and also programming and sort of just strategic plan so when the museum re-opened there was a significant push to be accessible and inclusive to all audiences, and because of that plans started to, my predecessor ...began offering access programs for specific audiences in 2008 and she very quickly was able to expand those offerings.

In 2011, the museum “approached Autism Speaks to see if they would provide a grant to help start the Early Morning Opening, and that was a successful initial partnership.” One of the interviewees from this site linked the start of autism events at the museum to the development of their hands-on, interactive space:

The museum was now able to do it because we now had the [interactive exhibit room], our interactive space ... in a program like this and so I think that really shaped the model of our program, ...It coincided with the founding of the Autism Advisory Council, and so those did go hand in hand, and I think that’s really valuable that it was happening at the same time.

Another interviewee claimed the motivation from the museum to start an Early Open was to enhance families’ engagement with the museum: “Continuing to come but also continuing to grow into the museum. That was what I would say the motivation is.” A Senior Manager described using the initial Autism Speaks seed grant as a pilot to seamlessly acquire more sustainable funding:

In terms of sustainability you really need smaller foundations to support your efforts and to really engage the community and they become more of those long-term partners. This is just me speaking personally. We do seek the department of cultural affairs in New York City, and they are a major part of our funding, but it requires matching grants.

2) What does it take to sustain autism events in the museum?

A common theme among staff responsible for leading autism events was the idea that the *outcome* of Early Open Events outweighs institutional burden, so that cost, time, and energy in developing an Early Open are perceived as minimal hindrances. That said, multiple issues

were identified as critical to sustaining autism events in the museum, including time and effort, funding, staffing, collaboration with other departments, and the role of either an advocate champion or a partnership to sustain the event.

Time and Effort: “It just took a Village, it was a joy to do”

At the Gulf Coast Museum, the EVP of Programming was involved in establishing museum-wide buy in and claimed setting up the event initiative was a massive amount of work and time: “It wasn’t difficult, it was intensely time consuming.” She described having over 20 meetings with different departments to get buy-in, and claimed,

Good collaboration takes a lot of time. And good collaboration for first time programming- you go slowly and maybe you keep iterating and getting feedback ... what takes the time, it’s the vision and the leadership and getting all the teams on board,..the museum, was really proud to do it.

But she quickly followed up by saying, that even though “it just took a village, it was a joy to do.”

An interviewee at the East Coast Museum claimed that the required effort compared to other programs

...varies by theme. I would say it’s relatively similar in terms of time preparation to like an access family program, although I do create a social narrative for this in a way I don’t necessarily for that, I would say it feels pretty balanced. Now this program has the added connection to the Autism Advisory Council, so they’re very linked, but I guess they’re kind of separate.

Financial Cost: Aspirations of the Museum and Practice

At two of the three sites, interviewees dismissed the outside financial requirements of these Events and claimed that museums would just make it happen. However, their descriptions of what their institutions actually did in practice suggested that autism events cannot or would not be sustained over time through operating dollars alone.

Aspirations: Museum Covers Cost

Some staff dismissed the financial burden to museums needed to host such an event by describing potential actions their museum might take, or by looking at other institutions. The SIP and Discovery Corps Program Manager at the West Coast Museum, admitting that her knowledge of the pilot autism events was “getting into lore,” claimed that if there had been no funds, her institution would have “recognized this is a small cost and has potential high impact and so we should just do it.”

The Graduate Student at the Gulf coast Museum reported a main finding from her interviews with a number of museums running autism events at the time,

what it boiled down to was it was a need of the community and it was a good fit for the museum and the cost was the least restrictive question, that didn't really play into their decision to either incorporate or not incorporate a program. So that was, that was a positive finding that it didn't seem like that was a factor in their final decision.

The Graduate Student working with the Gulf Coast Museum claimed that a staff member from an East Coast Children's museum said that running the museum for early or late open autism events,

...didn't cost them any more money because they opened at a time that the staff is normally there, but they're doing things within the building. So like the air was already on or the heat was already on or the lights were already on because staff was there in the building maybe just not on the floor. And so that really didn't cost them anything else.

Practice: Museums Will Not Support This Kind of Event without External Funding

In contrast to the claims of the Graduate Student, the Manager of the Science and Learning Center mentioned the extra cost of opening early. She describes the issue of admission for the first three events, “the first one the families had to- it was a discounted but then they did actually have to pay which none of us really liked, but there didn't seem to be a choice. The

second one was I think the same way. And the last we were able to offer for free.” The EVP of Programming describes her job as having to convince other staff of the event’s ties to the museum mission,

We say we’re learner centered so we need to, you know, this is a program within mission. So you can make a case; this is good mission fit. Then people in operations and maintenance and all of that, they all come on board and say, ‘ok it’s my job.’” Additionally, she would be looking at a new program and asking, “How does this impact your board of directors? How does this impact your funders? Is this going to bring new program funding to bear? Those are questions that I was accountable for.

The EVP of Programming was stunned when no funders stepped up for the initial event, because “when you’re a non-profit you want to do these, absolutely wonderful service for community, that’s your job, but you need somebody in there to help underwrite all of the costs. The hidden costs.” The Manager of the Science and Learning Center at the Gulf Coast Museum was faced with revitalizing the event after the first iteration failed to attract any financial support: “The thing after all of this happened, that I was the most stunned at...No foundations stepped forward.” Due to this failure to secure funding, the initial event charged reduced admission and subsequent events were put on hold for 2 years until there was an outside request to study children with autism at the museum and funding was acquired.

At the West Coast Museum, The SIP and Discovery Corps Program Manager asserts, contrary to her assumption that the museum would have covered costs in the past, that current Early Open Events come with undeniable costs,

because it is a monthly occurrence, and it has some other components including some staff training as well as some other projects for accessibility throughout our museum it is a larger cost, and so we do have to have funding support that our development team has helped to raise.

Also from the West Coast Museum, the Evaluation Specialist understands the necessary financial burden of the events. She says, “while there's not a new programmatic component we do have to pay for staff to get here earlier and that's not something that we'd ever budgeted for.”

The East Coast Museum staff reported a well-planned and prepared array of access programs following the museum's 2 year restoration. However, despite a dedicated team of staff and focused museum priority, and early open event was not attempted until a pilot grant was available 4 years later in 2012. This suggests that the East Coast Museum, even with a department dedicated to access, was not prepared to fulfill the aspiration of absorbing costs for an early open event into the operating budget.

Regardless of how much participants at the West and Gulf Coast Museums felt about the action their museums would take to support these events, it seems that in practice, the museums will only host Early Open Events with outside funding, and do not incorporate the cost into operating budgets in a way to make this kind of event sustainable.

Staffing

Each museum had a different staff structure which corresponds with the type of autism event experience each museum offers: One-Man-Band, Nebulous Community Choir, and Pop Group.

The Gulf Coast Museum seemed to involve the largest number of volunteers (50) and floor staff, but the least dedicated and well-informed lead staff. Staff described the event as being organized much like a one-man band, with one leader at a time responsible for everything involved with designing, coordinating, training, evaluating, and pursuing grant funding. This may be in part because the event was first implemented by an outside agent: a graduate student at

a nearby university, and then taken up by the manager for a newly developed Science and Learning Center.

Staff at the West Coast Science Museum described their autism Early Open Event staff structure like a pop group, with four core leaders and a strong following of backup players which give the song breadth and power. The West Coast Museum's Early Open had roots in a partnership with a local Children's Hospital and the state University's Occupational Therapy Center, a sporadic, private event with little or no funding. After a shift in donor priorities, the museum applied for funding to host a monthly, more cohesive event to establish a baseline for a museum-wide accessibility initiative. This event was run with a "nebulous" structure until the third year, when the Manager of Science Interpretation (SIP) and the teen program took leadership of the event. Continuing with the music analogy, the West Coast's event was structured like community choir- improvements and synchronization of a song people already know.

At the East Coast Museum, the Early Open was characterized as a team effort and as the entry point for many families with children with autism; one of many tailored experiences on a continuum of support and inclusion. The person in charge of Early Opens is the Senior Manager of Access Programs. She described her role within the Education Department as follows:

We are responsible for developing and providing all these specialized education programs, experiences that we think of as being on a continuum....mainly my role is to be that spokesperson especially to the president to the VPs, to be a part of those strategic planning conversations so that when we think of the future of the museum we make sure accessibility and inclusion are a key component of that.

For the day to day, the Senior Manager of Access Programs directly supervises “3 full time educators in our department and we’re all dedicated to accessibility so there’s four of us, full time, which is pretty good if you compare to other institutions.”

At the East and West Coast Museums, autism event staff are situated in the education or access education departments. At the Gulf Coast Museum, there has been one individual in charge at a time: first the Graduate Student, and then the Manager of the Research and Learning Center. There does not seem to have been any involvement with the Education department. In fact, the EVP of Programming claims that “we had no capacity our education director. [She] was a terrifically talented woman, she knew some things about autism, but she, you know, we wouldn't have been able to pull this out with just what she knew.” The Research and Learning Center was established at the same time as the first autism Event, so it is fairly new to the museum. This newness and the disconnection with the education department may influence some aspects of the autism events.

Collaboration with Other Departments

Across all sites, autism events involved many departments. Staff had some difficulty explaining precisely how many staff and in which department contributed to the “behind the scenes” portion of this event. Common to all sites was the involvement of volunteers, curatorial or exhibits departments, the marketing team, and other roles- grant writing, facilitation, evaluation, registration and check-in are done sometimes by core staff, and sometimes by others departments.

At the West Coast Museum, there were a number of departments that contribute behind the scenes in preparation for autism events:

It does involve some time from our marketing team, some time from our design team, some time from our development team, our funding team - doing reports and continuing to seek funding for it. Some time from our human resources team, again this is part of what they do so I don't know how much that time is.

For the event itself, in addition to an exhibit person and a custodial person, this event required “at least one guest services person out letting people in. We have another person who is manning our information booth. And we have at least ... 6 of our educators here plus their supervisor. And we must have at least 3 people in the theaters” measuring out to just under 15 staff. In the words of one interviewee, “It is definitely an institution-wide effort.”

At the Gulf Coast Museum, autism events involved various departments but were primarily accomplished through the work of one individual manager, including scheduling staff, inviting 10-15 researchers and therapists, assembling and meeting with an Autism Advisory Board, designing an evaluation, and seeking funding: “Basically, I do most of it.” Other departments involved in this event include custodial, exhibits (“8 people working together to check people in”), and floor staff (“maybe 10 to 20 people out on the floor). One interviewee described museum staff taking reservations a month in advance, a single “lighting and heating person,” and “at least just 3 museum staff that would normally be there that day, they just came in early.”

An interesting aspect of this museum’s staffing for autism events is the use of per diem educator, who are flexible because they are not exclusive to one program or department: “[They are] primarily hired through school programs ...those who are interested in starting to teach our All hands programs [which] are our specialized school and organization programs for groups with disabilities” will receive scaffolded training.

At the East Coast Museum, a Senior Manager explained, “We run sort of bare bones on the other departments....It’s mostly educators, it’s mostly an internal operation.” When staff listed the needed staff and volunteers, in total there would be about 21 people working on the day of the event. The Senior Manager detailed the elements and staff needed for this event, including: 1 staff and 1 volunteer to check in, 5 educators to lead tours, and a floater.. In addition to full time educators, “teens and the volunteers help with guiding the groups through the museum, with latecomers, and also leading the activities, and the table activities in the [interactive exhibit room].”

Advocate Champion or Partnership

Across all three sites, staff attributed the success of their autism event to one or two advocate champions within the museum. At the West Coast Museum, one interviewee said that working with the autistic community “was very near and dear to the corporate relations officer at the time. What her personal interest in it was I’m not sure, but she was really excited to take the lead on this.” Six years have passed since the first autism event at the West Coast Museum, and staff admitted that discussions about the early days is “getting a bit into lore.” Though there are staff advocates credited with the beginning of the Early Open event, “we just had a couple of staff members on our education team that had experience or some knowledge or interest or probably all of the above, working with folks on the autism spectrum, and recognize that this could be a thing of value for them.” One interviewee admitted that community partnership was also significant to the sustainability of their autism event: “Whenever we start anything new, it is a little bit of the chicken or the egg, a little bit of simultaneous evolution in a way, where there is both an internal interest and there’s been starts of some conversations or blooming relationships in the community.”

The Evaluation Specialist at the West Coast Museum suggested that though the Early Open Event may have been championed by an advocate, its presence led to a shift in museum wide priorities:

I don't know that there was an organization-wide interest...[but] very soon after this was also the instigator, almost, of our umbrella of programs called Expanding Access, so that includes things like low income family membership, youth family membership- youth access membership specifically designed for children and youth in the foster program, and various other sorts of expanding access type of things so this was almost the instigator of having and committing to a suite of programs...this happened first and then very shortly after it was like, well, why stop there? Let's start expanding access for all sorts of situations.

At the Gulf Coast Museum, the graduate student responsible for the first autism event said,

I think it takes somebody from the inside championing [the event] who truly understands the need, the necessity, and how that benefits- how that goes back to the community, that's a public service thing that is a good, if you wanna have a selling point it's that.

When asked if the presence of a local autism community or advocate group had an influence on the start of an event like this, the EVP of Programs said, "No, it was time for us. We needed to do this...it was [the Graduate Student]'s passion that this happened." Her responses seemed to describe parallel efforts, from across the museum as well as needing an advocate champion or two. The Manager of the Research and Learning Center also sees this parallel, claiming both that the start of the Early Open "was just good timing between the 2 between autism speaks and the university approaching them at the same time and the museum wanting to do it as well," and admitting that once the Graduate Student left, "there was really nobody to lead it, that's the reason I'm doing it totally by myself."

Although the beginnings of the access initiative at the East Coast Museum were spearheaded by a former staff member, generally the current staff did not characterize a advocate

champion as necessary for the Early Open Event. Instead, they brought up the timing of the Autism Speaks Grant, and the partnerships with the Autism Advisory Council, the support from groups like the Museum Access Consortium, and the reciprocal professional development with other museums. As one museum educator said, conferences provide “motivation for us to put ourselves out there and share out our stuff because then we get to go and also learn from others.” For example, all the staff interviewed had at one point worked on registration for the event, and many have worked on creating curriculum, and assisting staff accessibility training. The Senior Manager claimed,

For me I believe the community is so crucial to the overall formula of everything, that location can really be a game changer, that you need to find your local community advocates and outreach partners to really have a successful experience, to make sure they're involved into the program itself.

Synthesis: Advocate Champion or Partnership

One thing in common with all these sites is the pervasive idea of an advocate or champion inside the museum. This idea shows up even from staff members who also describe partnerships involved in the nascent stages of their Early Open Event. Curiously, the only museum to avoid describing the inception of the event as a simultaneous coincidence between the community or partner and the museum’s own priorities is the East Coast Museum. Though the accessibility initiative at that museum had been planned during the two year period of restoration, the Early Morning Openings only started after a seed grant from Autism Speaks years after the reopening. The East Coast Museum does reveal acceptance of the Advocate Champion model, in the form of the former head of the access initiative, who was responsible for starting the Early Open. The East Coast Museum staff described volunteers on the day of the event, some of whom came from an Occupational Therapy School as partners. Neither the West

Coast nor the Gulf Coast described their volunteers as partners. But all three described links with universities as a kind of partnership. The West Coast Museum staff referred to an early partnership with the University of Washington Occupational Therapy Program, the Gulf Coast Museum's Event was started through an existing partnership with a university, and the East Coast Museum has been working with an Occupational Therapy school as well. The East Coast Museum's university partnership, however, did not result in pre-visit materials like visual schedules and social narratives as those are created internally. However, the collaboration with other museums may influence other resources, Museum Educator A credits the Franklin Institute's website resources which "directly inspired the sensory guide that we then developed, not for autism, for these programs, but for general visitors as a resource."

3) What is the nature of museum-based autism events?

Focus of Events

Though each site has several event elements in common – for example, pre-visit materials, adjusting of lights and sound, reduction of admission fees – they differ in their overall focus within the event. The West Coast Museum focuses on staff training and atmosphere; the Gulf Coast Museum focuses on autism resources; and the East Coast Museum focuses on a structured, supported experience.

Staff descriptions of the West Coast Museum's Early Open event focused on environmental accommodations, low pressure visitor experience, and a safe, welcoming atmosphere for families. An interviewee in Evaluation Department described that sensory sensitive means "we dim lights where we can, we turn off like the growling dinosaurs. We try to lower sound and not to make too many PA announcements, it's also a time when the Laser Dome is not in use, and we're able to offer that as like a safe quiet chill out space." However, the

marketing materials for these events make no mention of these accommodations: “Families with children on the autism spectrum are invited to explore [name of the museum] on the second Saturday of each month before opening to the public, free of charge through the program, Exploration for All: Autism Early Open, presented by Safeco Insurance.”

The staff at the Gulf Coast Museum characterized their autism event as a safe space, which also brings parents and resources together. One interviewee described it as a time when “families could enjoy without the pressure of what they perceived as an environment of people judging them and also that it was a safe place so that if their kids ran they didn’t feel that it would be a unsafe.” She also underscored the value of bringing resources into the same space as these families:

One thing that I found out from being a teacher is that people assume that parents have all these resources available to them, and they do, but the parents don't know where to go to get them, and it certainly doesn't happen in an IEP meeting I can tell you that...it's really tricky to make sure it doesn't turn into a sales pitch, because then the museums can get in trouble, but just a little bit more than a flier so if they have true questions there is someone they can talk to, but definitely not a sales pitch.

The EVP of Programming also described the event as a meeting between people representing services for the autistic community and families with a child with Autism Spectrum Disorder:

There were probably ten different really delightful community people who were there because they were really smart about the autism spectrum...they came in and they did what they did well. So we did what we did well, which was to provide the environment, minus light, minus sound, and they came and populated the experiences.

Additionally, the EVP of Programming recalled visiting resource groups providing music, singing, gymnastics, and puppet shows. Conceptually, also, the focus of the Gulf Coast event is akin to a resource fair, with very little facilitated experience or programs done by the

museum. Part of this may be because of the idea that the adaptations needed for this kind of event at the Gulf Coast Museum are contrary to the museum's engagement strategy. She said, "Our public role is to engage through color, light, design, sound, visual, excitement, and it was like the opposite. So ... we needed to tone it down by 10."

At the East Coast Museum, a Senior Manager described their autism event as part of a continuum of experiences:

The early morning opening is often an entry point to seeing the museum and experiencing it and feeling comfortable and safe because we've created all these additional sort of supports we have so many staff members involved we have a lot of visual supports available, it's not crowded, it's not loud, but we hope that over time as families become more familiar with the spaces and our educators and our programs, our content that they might try the museum in other contexts.

Another interviewee claimed that the continuum of experiences is a "guiding principle of all our work." Internally, Museum Educators for Access Programs refer to this shift in attendance as a graduation for families, who because of this entry point are later able to enjoy the museum in more crowded and stimulating contexts. In the words of one museum educator, "We've seen families start out by coming to our Early Openings and kind of struggle and just need to have that more private experience where it's closed to the public, who now are able to come to like Kids Week where it's very crowded." Another museum educator said,

[The event] is meant to make the museum more welcoming and break down some of the barriers that might ordinarily be there for someone with autism. So we start the program a little bit over an hour before the museum opens to the public so that we can have more control over the environment. We control sound, we don't have crowds, and we really make it a multi-sensory fun program. Each one addressing different topics and content, but always something that's multi-sensory and interactive and for the whole family. Then we conclude in the [interactive exhibit room], where we keep it closed off for an additional hour and children and families are welcome to explore interactive exhibits and continue kind of delving into the topic at different activity stations. Where we try to make sure there are a wide range, a variety of types of materials and types of experiences.

Evaluation of Events

All three sites reported that their event had been evaluated. A review of evaluation reports across the sites suggests that these evaluations had different objectives and results. At the West and East Coast Museums, internal evaluators provide robust studies and ongoing data in support of autism events, while at the Gulf Coast museum evaluation studies have assessed visitor satisfaction with the event. The robust evaluations impact the shape of the events.

At the West Coast Museum, the in-house evaluation team did front-end, formative, and summative evaluation of the event with surveys and interviews, trying to determine what visitors wanted from the event, what they felt they were getting out of the event, and what improvements could be made. The Evaluation staff member summarized the results as follows:

I don't know that we made a ton of changes based on that but it was smaller things like making sure the signage in the garage [was clear]...There were a few things that we weren't sure how they were going to go with our audience, um, and families really liked them, so there was a live stage show that features a snake, so the snake and animals in general are really popular, so we kept that. We thought maybe we'd have to change this every time, but folks pretty consistently always loved seeing that one. ...One thing that we had already talked about but worked in our front end was having the laser dome or having a space set aside specifically for quiet time, with no other disruptions or other sensory stuff kind of happening, so it was nice to see something that we thought would be a good idea really was...from the summative, we found out that the event was really important to people.

And though many visitors found the early hours challenging, the summative report concluded:

Parents discovered that their kids could be really interested in patterns, or something really specific like how things work, so they discovered some really cool things that their kids could be engaged with for a long time, yeah so it was all wonderful things that we hoped to hear about.

The summative evaluation offered recommendations for the events: "Moving forward, continued success will depend on a focus on positive staff interactions with guests and the maintenance of the uncrowded, calm environment that so many mentioned as being crucial to their experience." Although the changes made were minimal, the robust nature of the evaluation helped the museum and funders see precisely how well the event succeeded at serving this audience.

At the Gulf Coast Museum the Manager described collecting data herself to inform the event: "I didn't really have any assistance on the evaluation, other than just having some highschool volunteers type it up." Over the two years she has been in charge of the event, she has used ipads, email surveys, and catching people as they walked out the door to collect data. The impetus for this was not externally imposed, rather "I think it does help with keeping the event going." Data from the evaluation reports reveal that parents were satisfied with the event. The majority wanted a quarterly event, and described seeing their child have fun as the best part of their visit.

At the East Coast Museum, an educator described some early external evaluations:

When it first was starting up, Autism Friendly Spaces helped out by doing an evaluation. They observed the program and then provided some suggestions based on their observations, In addition we, I know that before I was working on it some Bank Street graduates did a project but I think they ended up focusing on the overall, the Early Morning Openings but also the family access programs.

The Senior Manager explained that the East Coast Museum has an internal evaluation team that has "helped us refine our evaluation practices, since the very beginning in 2012 when the program was first started." Another educator explained, "[Our in-house evaluator] led a working group that's across the museum departments, where we standardized evaluation

questions for the museum. And that's been really helpful in that we can compare data across programs and teams and departments.”

Findings from the most recent evaluation were focused on the context of the visitors, where they are travelling from and, “We've asked more recently if people speak another language than English at home, and surprisingly 54.39% of respondents speak a language other than English.” A Manager explained that the focus is on the families:

One of our goals it to help families feel more comfortable in a cultural setting, and it helps to know if this is their first time ever going to a museum with their child or if they do the circuit, if they're going to the [Metropolitan Museum of Art], and MOMA[Museum of Modern Art], and the Whitney[Museum of American Art], and we're just part of that experience. It helps us to know what kind of experience and what kind of family they are.

4) What kind of training do staff receive, and how valuable do the staff find that training to be?

Each Museum has attempted some accessibility training for staff on the floor of their autism event. The East and West Coast Museums have also conducted more general staff accessibility trainings for staff throughout the museum, on the floor and behind the scenes. A common idea is the need for at least one person in the museum with professional training or experience with children with special needs in a school, though this was usually accompanied with strong emphasis that passion and on the job experience, (particularly in museum education) could also be sufficient. The training intensity may influence the role of staff and the nature of each museum's autism Event - the West Coast Museum has many facilitated exhibits, the Gulf Coast Museum has few or no facilitated exhibits-- guest therapists and researchers provide experiences, and the East Coast Museum has almost constant staff and visitor engagement.

Staff Training Targets and Staff Training Frequency

The frequency of training and who receives the training seems to compliment the number of staff and the structure of the events. As all staff emphasized the value of training, it is possible that the frequency and targets for accessibility training are at the mercy of available resources. The Gulf Coast Museum, with a one-person-band staff model and yearly interactive resource-fair style events, has training least often, and for the smallest number of participants. The West Coast Museum, with the community choir staff model and monthly adapted- free choice learning style events has had yearly external accessibility training focused on both staff directly involved in the events and all department staff. The East Coast Museum, with the pop-group staff model and intensive tour events, has yearly all-department accessibility trainings, onboarding accessibility training for all department staff, and frequent (described as continuous), intensive training for staff participating directly in the events.

At the West Coast Museum, the grant covers accessibility training for this event “so staff training has always been a component so every year it's a little bit different” with an end goal of establishing an internal accessibility training practice and expand the museum’s overall accessibility initiative. Additionally, staff who have received in-depth training desire more training, which suggests that resources are the only limit to further accessibility training. All museum staff received a one hour, introductory accessibility101 training from a consultant training group which had an existing relationship with the funder. The 11 page PowerPoint defines inclusion as "a proactive approach and belief that every person, regardless of ability or background, can meaningfully participate in all aspects of life."

Then, the consultant training group gave a three hour workshop, a “more in depth training with some of our staff who directly interact with guests more often” as well as the Train

the Trainer program “so we now have staff who are qualified to lead that training again. Part of our grant funding this year is to do some of that training for staff again.” This more intensive training was geared toward staff in “education, because again that's where we have the biggest need. And they have longer term engagements with these guests.” Staff who had this training later wanted more workshop experience, more in depth content, and more time for training. In a six-month follow up to this intensive training, 67% staff identified the specific scenarios for a museum setting most helpful and suggested improvements to training: to be more interactive, include more strategies, and, 26% of staff suggested the need for more time in a future training. This desire for more in-depth training indicates staff wanted to improve and increase the amount of engagement with visitors with special needs.

One staff member mentioned that museum administration is re-organizing its various training priorities and onboarding accessibility training “a 20 minute or 30 minute addition to orientation that way we make sure everybody gets it.” Additionally, staff were not aware of subsequent, internal staff trainings since the external trainings, though one interviewee thought “individual managers have been managing who needs the training on their teams, and hopefully working with HR to arrange a trainer to come and do that.” These comments reveal a shift towards prioritizing internal accessibility training concurrent with the goals of expanding inclusion in the grant.

Accessibility training has not been fully established at the Gulf Coast Museum, perhaps because there are limited resources for this element. This museum has had informal trainings with low attendance, prior to each yearly event, which only involves volunteering staff participating directly with the event. This museum has hosted a training for teachers and parents led by a member of the Advisory Board, but not aimed at museum staff. Prior to the first event,

the Graduate Student and the Manager of the Science and Learning Center both attended a professional development workshop at the Children's Museum on the East Coast. The Graduate student felt strongly that the Gulf Coast Museum staff needed accessibility training, and said she and the Manager of the Science and Learning Center "really need to do this." This sentiment was shared by the Manager of Science and Learning who reported, "one of the staff said ' I really needed this because I've had children who've had meltdowns and I didn't know what to do.' so it's helpful even beyond the event."

Staff at the Gulf Coast Museum value training, but resources limit how many staff at the museum receive training and how often that training can realistically be offered. The Graduate Student, who has experience teaching students with autism, prepared a staff accessibility training with the goal of being what she called a "mini special education in a training session" to introduce all museum staff to accessibility. She wanted this training to reach as many museum staff as possible, claiming she had "planned to offer it like three or four times so those who couldn't go the first time could go the next time... we were really putting ourselves out there so we were trying to capture [staff] at whatever time [they] have." However, the Manager of Science and Learning claims this was delivered "mostly with the managers" and the Graduate Student said, "there were 3 people that came" to the training they had prepared. Subsequently, the Manager of Science and Learning Center gave a training "for the volunteers I did do a short training. Just for, just immediately before the event. But most of the volunteers were already involved with the autistic community in some way." According to the Graduate Student's description of the role of staff and volunteers, their main purpose seems to have been to stand guard at doors.

The East Coast Museum is constantly involved in accessibility training for floor staff, as well as yearly trainings for the entire museum. However, staff from this site also felt limited by resources. The Senior Manager of Access Programs has had professional training in Special Education. She explained the work culture in her Access Department:

I'm a huge believer in continuing education and professional development. I go on webinars and I'm constantly reading and going to workshops and I encourage my staff to do the same. I really value that time, and believe it's important especially if we're training others to make sure that we're current and you know best practices and trends and understand what other cultural institutions are doing. In New York City there's a really wonderful community and we'll often observe each other's programs.

Everyone else interviewed concurred that there is frequent professional development for the team, and many accessibility training sessions for staff. The Manager emphasized the continuous nature of accessibility training for her department; “There’s this local community and then there’s this national community that I feel tapped into and we’re constantly sharing resources and ideas with one another.” Every new hire gets accessibility training as part of their onboarding procedure. In the words of one museum educator, “Every educator gets, early on from their time in the museum and then usually throughout their time here each year a training that’s about accessibility and our access programs in general.” The Senior Manager corroborated: “We work with and talk to HR to make sure we're doing training for all new hires for the entire museum.” The Access Department gives the entire museum a yearly accessibility training and customized trainings for the Security Department and Visitor Services Department. However, the Senior Manager claimed length and frequency of trainings are constricted: “It really sometimes depends on our money, our budget.”

Education staff get the most intense training, and facilitate high-engagement experiences during the event. But even this training is restricted by resources. One Educator said,

The way that we are able to go to conferences that are outside of New York City is that if we are presenting. So I'm going to AAM in May because I had a session that was accepted. Motivation for us to like put ourselves out there and share out our stuff because then we get to go and also learn from others.

A museum educator described it as “everybody who works on this program has been more intensely trained internally by our team and by outside professional development and we lead period trainings for the education department, and for our teen interns.” The manager emphasized that before being able to work at an Early Open, staff must not only go through a “3 hour” accessibility training, but also “before any educator leads a program that's specialized, that's an access program, they have observed it multiple times, not just once, multiple times, and that they have co-taught at least once, hopefully twice before they're solo teaching.” So it seems that regardless of how often these three museums offer accessibility training and for whom, staff value training and are restricted by resources.

Staff Training Content and Trainer Expertise

The focus of accessibility trainings also varied by site. The West Coast museum's training ranged from general disability etiquette to more intensive and museum relevant workshops; the Gulf Coast Museum's accessibility training focused more on what autistic behaviors staff may see and how to respond to those behaviors; and the East Coast Museum's trainings emphasized etiquette and the reasoning behind the design of the various access programs for the entire museum. Though something like disability etiquette may sound intuitive, it seems to play an important role in the spread of inclusive practices. It is notable that etiquette and person-first language was used at both the East and West Coast Museums to inspire a cultural change. However, the Manager of Science and Learning, who is in charge of the Gulf Coast Museum's Event, was not aware of the concept of person-first language. And the Gulf

Coast Museum is the site which reported the most difficulty getting buy in across the museum and securing funding.

At the West Coast Museum, the content of the trainings included person-first language, the need to ask: “not assuming that people either need help because they're struggling because they may not they may be just fine, or not assuming that people are just fine because it looks like they're moving along ok,” and “role playing came up in a casual sort of way, in a more question to the audience ‘what would you do if this happened?’” The museum suggested the accessibility training organization which the funder had previously used for an accessibility training for representatives from all of its grantees. The staff training element was important to the shared goal of the museum and the funder of increasing inclusion, as the Foundation Relations Officer said, to “take it to another level.”

In addition to staff desire for accessibility training, visitors prefer museum staff to have accessibility training. The summative evaluation claimed that visiting “parents were reassured by the fact that staff had received training. One parent commented: ‘I heard that the staff got trained and that makes me feel really good. In other places they don't know how to work with kids with special needs.’” Evaluation shows that visitors value how staff reached out to actively engage with kids. The accessibility training enhanced staff’s ability to improve visitors’ experience and level of engagement. Improved staff skills for working with people with autism may allow for and increase the likelihood of a more engaging event or additional inclusion-focused programs.

Due to the one-man-band kind of staff structure at the Gulf Coast Museum, it seems to have been difficult to implement an internal, well-rounded accessibility training. The Gulf Coast Museum’s initial training included person-first language and the focused on understanding a

range of autistic behaviors, but was constricted to a shorter time than the Graduate Student had prepared for and was attended by 3 people. She explained that they discussed how to interact with children who might run toward doorways, and that

...a lot of museums have a certain area that's for a certain age limit,... that you have to make that decision as a museum if you're going to adhere to that age limit, because you're going to have developmental age, so you might have a child who's 14 but is developmentally a 4 year old, and so they just had to make that determination if they were going to adhere to that or not.

However, Person-first language did not seem to stick at the museum. When asked about content, the Manager of the Research and Learning Center, who had attended the initial training did not recognize the term “person-first language” and said she not trained others about it. She described the subsequent trainings, which she hosted for volunteers, aimed “to make them aware that [children with autism] might have meltdowns. Kind of how to watch for triggers, how to respond, and also kind of how to, in general, to approach a child with autism.” None of the interviewees at this site described an all-staff accessibility training or an in-depth training for staff and educators that included person-first language or strategies for engagement. This paucity of training may have influenced the amount of engagement attempted at these Events and the museum-wide level of buy-in for an inclusion initiative.

At the East Coast Museum, the Manager and three Museum Educators of Access Programs create a core group of Access Educators who continuously engage in professional development and best practices, and train other educators and the rest of the museum in person-first language, etiquette, best practices, and give an overview of the museum's access and education events and programs. When asked what material they use, the Senior Manager described the content of those trainings as follows:

Absolutely person-first language is something that we talk about because I believe that language is powerful, and that it helps influence the way that we think. So the more that we can intentionally use person-first language, the more we think of that person first. And I think that's a really basic element of customer service and making sure everyone feels valued, respected and can participate, I think that's super fundamental.

The Senior Manager also mentioned practicing teaching techniques and going over etiquette and inappropriate touch, "touching someone's hand might not be a big deal for us, but touching someone's hand who is sensitive to touch might trigger something else."

5) What resources, if any, do museums look to as guides or models for building these events?

The West and East Coast Museum staff tended to describe their own museum as a resource to others, and describe "reciprocal" professional development. The Gulf Coast Museum's event was modeled after a particular event at the Children's Museum in New Hampshire.

At the West Coast Museum, an interviewee described the very first autism event with the local Children's Hospital: "It was fairly planned in that they reached out to us and worked to find a date that would work, you know for their families, that we could make work on our side, and then of course they scheduled out a time, handing out flyers to the families that they worked with, to be sure they spread the word. If I remember correctly, they actually brought like little prizes to hand out to children." Staff had difficulty identifying a partner group or resource that their museum sought out, instead recalling how few events like this were available at the time. The Foundations Relations Officer explained the lack of examples available when they started: "There weren't a lot of other institutions that were doing anything like this so we just kind of forged our own path." In fact, staff reported that others used their event as a resource:

Primarily other museum groups, but there were also a few like PTA or community organizations I had a couple parents who were active with autism spectrum support groups and different areas who were like ‘we'd like to partner with some other museums’ to start something like what we were doing here. The first year we did these events we actually got quite a bit of media attention for it. The local news came out and did a story.

In contrast, the Gulf Coast Museum’s Early Open event was heavily influenced by the event at the Children’s Museum of New Hampshire, and interviewees reportedly attended multiple autism events at other museums. However, their answers to whether there was a partner organization involved in planning differed. One interviewee gave multiple examples of interactions with Autism Speaks and other museums doing an autism event: “I created the program, but with a lot of feedback from a lot of people.” In a research poster on this project, the Graduate Student claimed there are common variables for most of the existing museum-based events for visitors with autism:

Feedback from families of children with autism, staff, and the community is number one driving force.
 Consultation with specialists familiar with autism is critical.
 Staff awareness of autism is critical.
 Compared to other events little preparation is needed.
 Fiscal gain was of lowest importance.

The Manager of the Research and Learning Center found the two meetings with the advisory board to be helpful as a sounding board:

We talked about how many therapists would be good how many people to include, a lot of what they did was kind of saying ‘this is what I'm thinking of doing, what do you think?’ and a lot of times they would just agree with the things I had already put together, mostly. I don't know that it was as important for their input as for the connections that they provided. And just their general support, and just kind of letting them know I wanted them to be a part of it.

In contrast, the staff at the East Coast Museum see their role as being a resource to others. Early partnerships were acknowledged, including funders and an evaluation done by Autism

Friendly Spaces. One interviewee described the potential influence of the partnership with Autism Friendly Spaces:

I do get the impression that that helped shape the structure of the program, I think, both the evaluation but also the ongoing conversations that they were having. I mean I can tell you that the conversations we have at the advisory council and that we have in the surveys have definitely helped shape the program.

The Senior Manager also called attention to the Autism Advisory Council, which meets quarterly: “We've had that since 2012, and it started off as being only parents of children with autism, and we've expanded that to include adults with autism, which we think is a more authentic feedback loop.” The Access Department put effort into incentivizing this partnership: “We also share out lessons learned or upcoming events in the community we want to try to keep them as engaged as possible, and if they attend three out of four meetings and have been to one of our family programs in the year then they get a family membership.” Additionally, the East Coast Museum advertises the Advisory Board on its website, featuring a quote that emphasizes the influence someone on this board has, “...It was a pleasure to see how our ideas, concerns and issues were quickly embraced, to help create more amazing future tours for all children. I can't wait to see all the new ideas and projects during future tours.” However, that is where external resources seem to end.

The Access Department frequently gives advice and support to other museums, presents at conferences, is involved in local professional development and works with local groups more for spreading the word, “to cross-pollinate,” than seeking guidance or feedback. The Senior manager described how her team “actually helped provide initial feedback for the American Museum of Natural History's Discovery Squad program:

If we are leaders of accessibility in sharing our information, at the same time every conversation we have is helpful and informative for us to be reflective of what we do and why we do it. Which is then a learning process so even if we're sharing our information under the guise of helping someone else I think that we help ourselves in that encounter as well.

The Senior Manager claimed that by “being a part of MAC we've been able to arrange reciprocal professional development, so I've gone and trained other museum staff, and I've had people come and talk to my staff, not necessarily for Early Morning Openings but for other sort of disability awareness training.”

Chapter 5: Conclusions and Implications

The purpose of this research study was to richly describe and examine the nature of museum-based autism events. Five research questions guided this study:

- 1) What was the impetus behind offering museum-based autism events?
- 2) What does it take to sustain autism events in the museum?
- 3) What is the nature of museum-based autism events?
- 4) What kind of training do staff receive, and how valuable do the staff find that training to be?
- 5) What resources, if any, do museums look to as guides or models for building these events?

Using a case study design, data were collected from museum professionals or individuals at three sites who were highly involved with their museum's autism event via in-depth interviews and document analysis.

Conclusions

1) What was the impetus behind offering museum-based autism events?

Across all sites, several themes emerged in response to this question, including a) the ease of creating a pilot event, and b) the presence of an advocate champion for such an event. Also woven through descriptions of the start of an event was the importance of creating a safe, welcoming, and understanding space as well as the need for funding. The qualities of sites' events suggests that sites wanted to become more inclusive and these events were a step towards that goal.

Ease of Creating the Pilot

In each case, interviewees described the design and implementation as fairly easy. This may be in part because at these sites the programmatic elements of the autism events were not very different from what the museum was already doing. Interviewees emphasized the difficulty of funding, coordinating time and volunteers, and few even acknowledged the extra process of creating pre-visit materials or behind the scenes preparation unless prompted to do so. This counterpoints some how-to materials, which generally gloss over logistics. For example, Stringer (2014) suggests “planning and communication...to prepare the staff, educators, and visitors so they know what to expect” (p. 68) but does not address the behind-the-scenes effort needed for starting a new program. Instead, these guides emphasize elements that need expert input, such as pre-visit materials, staff training, and community collaboration.

Perhaps the emphasis on staff behavior rather than structural changes is because some museums consider their exhibits to already be accessible. Rudy (2010) claims that the hands-on nature and topical subjects of science museums make them particularly good for visitors with autism as these museums “have begun to realize that they’ve always embraced people with autism— and many are making a deliberate effort to reach out to parents, provide supports, and generally make themselves available to the autism community” (p.108). If that is the mindset from museum professionals, there would be little motivation to make further adaptations. In practice, the creation of these events seems to disregard the literature’s emphasis on specialized council with a community advocate.

Advocate Champion or Partnership Archetypes

One recurring theme was the idea of a champion to fight for the event from inside the museum. When asked about partner groups, most staff had trouble acknowledging contributions

from other groups as partnerships. The autism resource groups that may set up a table at an event were described by all sites as being a one-way partnership to advertise an Event for free. This is at odds with models for another museum-based access initiative, Art Beyond Sight, which describes collaboration and active community involvement as critical (Levent & Reich, 2013). Often the Advocate Champion is also an expert with experience supporting individuals with autism. Both interviewees and the existing guides for creating this kind of event always recommend involving an individual with specialized knowledge. However, interviewees emphasized this person's *museum expertise* over their special needs education expertise. This suggests a prioritization of museum goals and biases rather than a sincere partnership fits with community practice. The role of the Advocate Champion does not seem to last beyond the pilot phase of the event. It seems from the history of these events at these museums that it may take an Advocate or Champion to get the event started, but it requires many partnerships to keep going.

2) What does it take to sustain autism events in the museum?

All sites acknowledged the need for funding, with an expectation from some staff that the museum would make it happen even without external funders. However, long-term sustainability seems to rely on external. Staff responses suggest confidence in the museum's commitment to pursue a mission aligned with inclusion and access, perhaps bolstered by the attention on inclusion at museum conferences (AAM, Museums on Call, 2013; WMA Annual Conference 2016; AAM Annual Meeting, 2017). The American Alliance of Museums prioritizes "a commitment to providing the public with physical and intellectual access to the museum and its resources" as a core standard of museums and states a requirement that "programs are accessible and encourage participation of the widest possible audience consistent with its mission and resources" in the Code of Ethics (AAM, Characteristics of Excellence, 2017 and AAM, Code of

Ethics, amended 2000). For museums actively pursuing an accessibility initiative like the three cases in this study, it is puzzling that these sites have not incorporated the necessary expenses into the standard budget. In two cases, the staff leading the events were also responsible for writing grants, as opposed to a dedicated grant writer.

3) What is the nature of museum-based autism events?

Significance of Feeling Welcome

Despite the structural and content differences of these events, the desired outcomes and goals for each museum overlapped on creating a welcoming, non-judgmental environment for visitors. This involves breaking down barriers, making visitors feel welcomed, helping visiting families feel safe, serving as a resource, and supporting learning and engagement. Additionally, the elements included in Events seem to be influenced by the amount which a museum is tapped in to local community partnerships.

When describing the accommodations for the event, staff at all three sites mentioned the reduced stimuli, crowds, and reduced or free admission. The Gulf Coast Museum and the East Coast Museum require participants to register for the autism events, but staff did not seem upset by drop-off rates as high as 30% and 50%, and instead valued the limited crowd or saw this as standard for other kinds of programs. From the literature, we know that some environmental barriers parents consider are past negative experiences, overcrowding, lines, sensory stimuli, and a “lack of feelings of inclusivity” (Piri ,2016, p. 23; Mulligan et. al., 2014; Rudy, 2010). The reduction of these barriers fits within social model of disability, which situates the socially constructed elements as the disabling force. All staff saw these adaptations as simple and easy to implement, and that challenges were with scheduling and convincing exhibit and custodial staff to participate.

However, the clear priority staff emphasized was not the physical accommodations, but the cultural ones. A clear goal was to make visiting families feel welcomed and to provide an understanding environment free of judgment from staff and other visitors. This goal is also advocated by Stringer (2014) as her first of 7 key elements for a successful accessible program, “Training is essential for museum staff to be aware of techniques to provide a safe and welcoming environment” (p. 68). Antonetti and Fletcher (2016) found that parents of children with autism reported experiencing three times as many negative emotions associated with museum activities in an art museum as parents with typically developing children. Similarly, Smith et al. (2014) argue that parents of children with autism face more stress, depression, and stigma than parents of children with other kinds of disability. Research also shows that because of difficulty with social interactions, children with autism are more susceptible to being victims of bullying in school (Khemka, Hickson, & Mallory, 2016), face more risk of anxiety and depression in adolescence (Kasari, Locke, Gulsrud, & Rotheram-Fuller, 2010; Volkmar, 2014), and attend fewer arts and cultural activities than their typically developing peers (Rudy, 2010). Parent feedback from these events shows they feel their children are around other families who “get it” and their concern about their children is decreased.

Interestingly, a majority of the literature specifically about these events at museums stresses the potential for visitors to practice social skills, but only one interviewee at the East Coast Museum mentioned this aspect in their event. This museum arranges groups and Educators to establish rapport before a tour and has planned in a structured social time component featuring a guest expert. It may be that the staff at other sites view any social skills opportunities as inherent in visitors and museum staff being in the same space.

The focus on an autism-only gathering suggests that these events foster autistic culture, a side of autism advocacy which is sometimes oppositional to the organization Autism Speaks. This is an interesting intersection as one event was first funded by this organization, and another event explicitly invites researchers to conduct studies with visitors. Less explicitly, the third site involves some volunteers who are training to be occupational therapists, a vocation that sometimes aims to adapt individuals with autism to social norms. Additionally, all three sites featured social narratives of some kind, the purpose of which is to prepare visitors for a new experience and explain appropriate museum behavior, like waiting in line to buy a ticket. This subtle instruction seems to be at odds with acceptance of autistic culture and behaviors. In sum, then, these Events are a mix of both camps in autism advocacy, with an emphasis on cultural acceptance.

There appears to be a strong influence on the complexity of this kind of event from surrounding communities and how “tapped in” a museum may be to access and local disability groups. The East Coast Museum’s Early Open Event is the most complex, and they also have the highest saturation of community and professional development resources. The West Coast Museum has a few facilitated exhibits, which are referred to as core stations that are adapted for visitors with autism during their events. From staff at the Gulf Coast museum, lack of exhibits was emphasized and none that were open were mentioned in detail, relying on guest researchers and service providers to create experiences. This sparse offering and the level and frequency of community partnership reflects this too. The Advisory board, which has met only twice, and the partnership with Autism Speaks was described as validating, confirmatory, and with almost no suggestions or advice. In contrast the East Coast Museum has more frequent meetings with its

Autism Advisory Council, is fully immersed in “reciprocal professional development,” and receives feedback from individuals unafraid to give some constructive criticism.

4) What kind of training do staff receive, and how valuable do the staff find that training to be?

All interviewees perceived a need for staff accessibility training. Accessibility training also appears on all of the major “how to” or tip guides about starting an autism event or program at a museum. Accessibility training directly feeds into the ability to create a welcoming and accepting culture at these Events. The level of involvement with autistic cultural advocates as a partner seems to correlate with the frequency and content of training. In practice, this ranges from basic awareness in order to keep staff calm to etiquette and adapted facilitation to well-practiced teaching strategies.

For Art Beyond Sight, Levent and Reich (2013) recommend a collaborative approach to training. Reich et al. (2014) claim the barrier of a person’s social inclusion is that “not all staff members are well trained with regards to how to interact with people with disabilities,” which seems one of the easiest to resolve of accessibility barriers (p. 283). However, though almost all sources advocate that training is important, and should involve experts from the community, there is no explicit or detailed standard of excellence for museums. There is some consensus though, that museums that work toward inclusion practices are *continuously* working toward this goal, and it must be an on-going, and integral process (Reich et al., 2014). One museum site, with dedicated access staff, has been able to achieve this. However, in the other two participating museums, the accessibility training is the burden of advocate champion experts or partner groups, rather than the museum professionals. Resources for these events suggest museums take ownership of training, but in practice this seems not to be true in some cases.

The Play For All Initiative at the Chicago Children's museum has "disability-specific trainings, such as autism awareness" which Golden & Walsh (2013) claim is not only central to the event's success, but also "a vital contributor to a general culture change within Chicago Children's Museum" (p. 340). A cultural change may be the reason that of the three sites, those which have been hosting an event like this for a longer time have more extensive training, more cross-department buy-in, and more involved community collaboration than the site which has had less time and training.

5) What resources, if any, do museums look to as guides or models for building these events?

Two of the participating sites claim there were scarce resources available when they created the event and have since served as a resource to others. Both these sites provide more training, more frequent events, and claim more cross-departmental support than the museum with an event which was heavily influenced by other museums' Early Open Events. It is not clear what factors, if any, contribute to these differences. But it is possible that staff who lacked substantial resources and found themselves in the position of advising others have a greater motivation to prepare themselves for this role. It is also possible that because the event was instigated by an outsider and then situated in a new department not connected to education, the institution did not fully embrace the event. Aside from the graduate Student who started the event, staff at the Gulf Coast Museum emphasized the skill and expertise of others, particularly the visiting therapists and researchers for the event. This is different from the other two sites, where staff described ownership of internal accessibility training and creation of resources for visitors.

One resource interviewees had some difficulty categorizing were partnerships. All sites had help from trained volunteers, local groups that work with people with autism, funders, and other museums. Overwhelmingly interviewees claimed the event as primarily museum-created, without much influence from other organizations. However, all sites solicited feedback from visitors through evaluations, connection with someone with expertise in special education, and two sites meet with advisory groups of advocates. Although sites admitted that these connections influence and shape the event, they did not immediately think of them as partners. The core staff at the East Coast Museum engaged continuously in museum conferences and with a museum professional and advocacy group the Museum Access Consortium (MAC), in what they call reciprocal professional development. Coincidentally, this site readily acknowledged the participation from other groups and emphasized the connections with MAC and the local community working with access. This attitude of connections, collaborations, and partnership seems to coincide with the museum and its events and programs, and may be an influence on the frequency and content of training staff receive.

Implications

Practice

Autism is becoming a mainstream concern, with 1 in 68 children diagnosed, and a new, Autistic Sesame Street character (CDC, 2016; Sesame Street and Autism, n.d.). Families with children with autism face many barriers to community outings like museum visits. Many museums are proclaiming a commitment to being more inclusive, and making efforts to welcome specific groups like people with autism. The East Coast Museum staff describe that by having a variety of events and programs along a continuum of experiences. They have seen visitors graduate into less supported, more crowded and integrated situations. But they also mentioned that some families stay in one event or program, recognizing that to be accessible to visitors with autism, they must be accessible to the variety of needs that people with autism have.

With the right elements and support, museums can create a welcoming, supportive environment for visitors with autism. Pre-visit material, funding, evaluation, a specialist with expertise, and staff training are all important elements. It is possible that staff training, time, and partnerships within the museum and with local advocates are key factors that facilitate institutional change and improvement.

Contrary to what the literature suggests, the main emphasis of these events tends to be creating a cultural space for visitors, rather than opportunities for social skills practice. Recognizing this, it is important to critically review staff training content and frequency and leverage partnerships with other museums and advocates within the Autistic community to meet the needs identified by the local Autistic Community.

This case study suggests that over time museum-based events can grow from yearly minimal occasions, to monthly facilitated experiences, to a high-engagement entry point on a

continuum of experiences. This growth does not seem to be spontaneous, however. It seems clear that support is needed from within the museum, so that many people are actively working toward making the museum more inclusive, with continued professional development, added program elements, clear evaluation, and strong partnerships. Museum professionals could view an autism Event as the first step of many toward inclusion, a path that requires continuous work and which is made more effective with collaboration from advocates within the autism community.

Future Research

Although this research attempted to determine underlying structures and resources needed to host an event, more information may come from a closer look at museum upper management and the board of trustees' decision process and how institutional change occurs in reaction to an event. Research could explore whether some elements of these Early Open Events may influence organizational change. Reich et al. (2014) surveyed literature on institutional change and found these common key elements: Shared inclusive cultures, values, and beliefs facilitate change when present in an organization, and impede change when absent. However, there is as yet no analysis of theories of change with these kinds of events at museums.

Another avenue could be a study of larger scope which could identify what specific processes are involved in growing an inclusion initiative and expanding to additional events and programs. A project could compile and centralize information to define terms, evaluate and rank programmatic elements along a continuum scale, connect museums to resources, and synthesize how-to guides into a single formulaic set of recommendations.

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Appendices

Appendix A: Interview Guide

Understanding Autism Early Open Structure at Museums Interview Guide

Erin Salthouse // Phone: 805-722-0224// Email: csalt@uw.edu

Thesis Advisor: **Dr. Jessica Luke**, Museology Graduate Program, University of Washington
Phone: 206.685.3496 // Email: jjluke@uw.edu

I am a Museology masters candidate, researching the structure and requirements behind an autism early open program at museums.

Interview Questions:

I will ask you some questions about

- your role at the museum and during an early open
- the inception of the early open
- any accessibility training that may have occurred
- and if you are aware of any partnership with local access-related groups.

If there is a question you cannot answer, do not worry- I do not expect you to be an expert, I am just trying to learn about the early open from a variety of perspectives.

Your Role

1. Please tell me your official title at your museum and describe your role.
2. What are your duties and position in relation to the early open event?
3. How long have you been involved in the early open event?
4. How would you describe your museum's early open event to someone who knew nothing about it?
5. To your knowledge, how many staff are involved in the early open? What are their roles?
6. To your knowledge, is the early open being evaluated/ has been evaluated? If so, by whom? What was the focus of the evaluation? Is there a report that can be shared?

How did the event get started?

7. What can you tell me about how the early open got started at your museum?
8. What is your understanding of the motivation by the museum to begin an early open?
9. Do you know anything about how the early open got funded?

Now for some questions about accessibility training for staff and resources used to prepare for this ASD audience.

10. Is there a general staff accessibility training that relates to the early open?
11. Is there any kind of training for staff *specifically* for this event?
12. If yes, please describe.
13. Who gives this training (inside, outside agency)?
14. Who determines the training content and when was it last updated?
15. How long is it?
16. How often is it offered?
17. Is it required or optional?
18. Do you participate?
19. What did the training focus on? (person-first language, thought process/ understanding autism, role-play/hand-on practice, giving clear directions, other?)

Partner groups (autism parent support, disability advocacy, museum professional access group, informal education group).

20. To your knowledge, does the museum now or has ever partnered with any other organizations in planning or hosting the autism open events?
21. If yes, what kind of organization?
22. Organizations that engage with people with autism? :Parent support groups, disability advocacy groups, disability access/events groups (like Outdoors For All, Rock the Spectrum gym, special needs music or karate classes), autism research centers, Occupational therapy groups, public school special education teacher groups.
23. What is or has been the role these partners play in the early open event? (help in designing/ planning/ advertising/ tabling at event)
24. To your knowledge, did the museum contact any of these groups, or did any reach out to the museum during the planning process or after the early open began?
25. Did the presence of a local group that advocates for or works with people with autism have any influence on whether or not the museum should/ could host an early open?
26. Were there autism related events at other museums that served as an inspiration or resource for you? If so, what were they?
27. Were there articles, reports, or blogs related to autism programs and events at museums that served as inspiration or a resource for you?
28. Were there autism related events at museum panels, workshops, or presentations at a conference that served as inspiration or a resource for you?

Document Analysis:

- Any Evaluation data or reports done on the early open event.
- Accessibility training or protocol in staff handbook.
- Any additional resource, videos, staff member giving informal training, outside of museum resources in form of partner organizations or staff history.

Appendix B: Coding Rubric

Interview Q	Site	Function/ department	Research Q
Please tell me your official title at your museum and describe your role.			Org Q1
What are your duties and position in relation to the early open event?		Skill resource demand	
How long have you been involved in the early open event?			
How would you describe your museum's early open event		Scope/criteria	
how many staff are involved in the early open? What are their roles?		Human resource demand	
is the early open being evaluated/ has been evaluated?		Maintenance/ evaluation/ improvements	
how the early open got started at your museum		Planning event/ adjustments	
motivation by the museum to begin an early open		Motivation/mission	
how the early open got funded?		Finding Funding	
general staff accessibility training		inter-department training/ buy-in	Training Q2
training for staff specifically for this event?			
If yes, please describe.			
Who gives this training			
Who determines the training content		Training staff	
How long is it?			
How often is it offered?			
Is it required or optional?			
Do you participate?			
What did the training focus on?			
does the museum now or has ever partnered with any other organizations in planning		Community Buy-in	
If yes, what kind of organization?		Community Support	Resources Q3
Organizations that engage with people with autism?			
What is or has been the role these partners play in the early open event?			
did the museum contact any of these groups, or did any reach out to the museum during the planning process or after the early open began?			
Did the presence of a local group that advocates for or works with people with autism have any influence		Community need/ pressure?	
Were there autism related events at other museums that served as an inspiration			
Were there articles, reports, or blogs		Written resources	
Were there autism related events at museum panels, workshops, or presentations at a conference that served as inspiration or a resource for you?		Workshop resources	

Research Question	Interview Q	Deborah Cockerham	Rene Grimes	Colleen Blair
staff infrastructure	Please tell me your official title at your museum and describe your role.	I am the managing director of the research and learning center . So um, its along the lines of the living lab in Boston I don't know if you're familiar with that or not but what we do is bring, I basically connect with universities and invite researchers from area universities to come into the museum and set up short studies and then they conduct the studies with museum guests as they come through so they might do a 15 minute study of multitasking and as museum guests come through they can be a part of the study. So kind of current science, active science.	I do not work for the museum. And it was your capstone that created the early open? Yes, yes. That's correct. my capstone project was actually was just based on complex systems theory, complex adaptive systems, so I was just looking at incorporating an autism event into the museum and then seeing how far that would spread. I don't able to get that far as far as emergence and that sort of thing for adaptive systems, but then my questions just really boiled down to what would it take, what is out there now and what would it take to	I left, and during this autism program and all of that, my title was executive vice president of programming. I had the Imax theater- so I was responsible, I was that person at the end of the line where the bus stops, and when you're talking you know budgeting and strategic planning, and visioning and making sure that it happens , that was my job. So I had um, our, there, were Travelling exhibition programs, so all of our exhibitions that came in from other places, the scheduling, all of the events that happened around it ..I was also was in charge of all the adult programming, So it was, uh an interesting blend.
Resources needed	how the early open got started	it was just good timing from a Logistics perspective	our own internal team and then working with	
training	motivation by the museum	there was really no so my capstone	so when we set that as the standard, it probably	
	how the early open got funded	<i>first one didn't get funded</i> when we were	we started selling tickets I wanna say three weeks	
	general staff accessibility training for staff specific	We did one before the very first	I just can't I just can't tell you how wonderful	
	If yes, please describe.	What to expect from	Wanted to go but no I do not remember I what I do remember	
	Who gives this training	for staff, Deborah		
	Who determines the training	Deborah		
	How long is it?	An hour or less		
	How often is it offered?	just before event		
	Is it required or optional?	Optional but highly encouraged	people who are on the floor interacting in exhibits	
	Do you participate?	yes		
	What did the training focus on	<i>Person First language</i>	Yes, definitely person first language goes with all disabilities	
HR resource	does the museum now or	I think we maybe had ten institutions	They had Autism cares and there were probably	
	If yes, what kind of organizations that engage with people with autism?	So we had several New Hampshire	They were implementation, they were planning	
	What is or has been the reason	we had two meetings	interestingly enough the museum and I had already come	
	did the museum contact	I contacted them. [40:29]	I contacted each of them individually.	
	Did the presence of a local	just my opinion I think the Museum	No, it was time for us. We needed to do this.	
	Were there autism related	Well the Children's theater brooklyn	yes, but I think it was knowing that Dallas was	
	Were there articles, reports, or blogs		we had a board member who really [38:00],	
	Were there autism related	Probably but I can't think of any right now.		
		The second event	<i>it is necessary for someone on the museum side that is creating</i>	
			I think it takes they were such high quality partners. That not	
			You should tell I was glad I was as far along in my career as	

OR

Interview Q	Deborah Cockerham	Rene Grimes	Colleen Blair	Column1
Please tell me your official title at your museum and describe your role.	I am the managing director of the research and learning center . So um, its along the lines of the living lab in Boston I don't know if you're familiar with that or not but what we do is bring, I basically connect with universities and invite researchers from area universities to come into the museum and set up short studies and then they conduct the studies with museum guests as they come through so they might do a 15 minute study of multitasking and as museum guests come through they can be a part of the study. So kind of current science, active science.	I do not work for the museum. And it was your capstone that created the early open? Yes, yes. That's correct. my capstone project was actually was just based on complex systems theory, complex adaptive systems, so I was just looking at incorporating an autism event into the museum and then seeing how far that would spread. I don't able to get that far as far as emergence and that sort of thing for adaptive systems, but then my questions just really boiled down to what would it take, what is out there now and what would it take to	I left, and during this autism program and all of that, my title was executive vice president of programming. I had the Imax theater- so I was responsible, I was that person at the end of the line where the bus stops, and when you're talking you know budgeting and strategic planning, and visioning and making sure that it happens , that was my job. So I had um, our, there, were Travelling exhibition programs, so all of our exhibitions that came in from other places, the scheduling, all of the events that happened around it ..I was also was in charge of all the adult programming, So it was, uh an interesting blend.	

		incorporate a program like this in a museum in a way that would benefit both the museum and the community AND the museum be interested in that. And so it got to be a very narrow view of that.	
What are your duties and position in relation to the early open event?	very first event was a capstone project for a masters student at a nearby university.. I was helping...pretty much single-handedly did the second one. And the third one as well, but for the third one I got together an advisory board,	we had an occupational come in a occupational therapist, couple of them come and look and see you know what they might recommend as far as lights and just the sensory overload	if it didn't work it was my problem, haha So my job was to navigate the executive leadership to get it to happen to get the yes, ok um my job was to implement and do it well, so there was a potential um, um how would I put it, any time you launch a program like this you need to have a vision and a plan. So our hope beyond serving the community, was that we would have a new set of programming that was viable for funders.it was a pretty big museum and it took a lot of um navigating to get it to happen and i'm gonna step back and I'll say to you to get it to happen Seamlessly and without operational hiccups. So that was my job. [4:57] ok-I did not bring any content, haha, the ladies knew, uh, oh my goodness, they knew the autism community they knew the autism network,... they could make sure that when people came that morning that we had the most appropriate and thoughtful um, autism uh, educators on our floors but that was like 30% of the whole deal. The 70% was so how do you get a staff of people to buy in to make it happen, to make it happen really with love and no hiccups. So that was my job. And it was bringing together probably 10 different departments. probably took 6 months, uh, of behind the scenes talk talk talk talk, and buying in- um something like this when it comes to um special needs programming for communities you have to lovingly cause if you do it the right way, people will find nothing but joy and love in it and they'll be happy to serve, because at the end of the day we are in the service of the community, that is what we are there to do. 20 different segmented meetings to bring the entire museum together
How long have you been involved in the early open event?	2012	2012	
How would you describe your museum's early open event	we have therapists and opportunities, so its basically just an opportunity for less stimulation, so thats sensory and quantity of people, we do limit it	it was uh for families, uh of children with autism, but there was no age limit on that, uh families that had a child with autism and even their support system, friends, neighbors, whatever could come and experience the museum in a sensory friendly way,... families could enjoy without the pressure of what they perceived as in an environment of people judging	they gave us like 30 things that we had to do, “ you know you've gotta do this this this this” Well, that's good but it involved a whole lot of different departments. [8:00] from maintenance, to facilities, to the operations to guest services, exhibits to graphic design, so it Took, it just took a village, it was a joy to do um, and Debbie, I cannot imagine, I cannot imagine even taking this on without Debbie because we did not have, we did not have the expertise, and we had no capacity

		<p>them and also that is was a safe place so that if their kids ran they didn't feel that it would be a unsafe... <i>no planetarium or gift shop</i> there were a few things like that that were, made, a few exhibits we deliberately chose to not open them early.</p>	<p>our our ed director was a terrifically talented woman she knew some things about autism, but she, you know, we-she would- We wouldn't have been able to pull this out with just what she knew.... the museum, so our public role is to engage through color, light, design, sound, visual, excitement, and it was like the opposite. So we had, for us, we needed to tone it down by 10, we had to turn down a lotta light- you know we just needed to open early and very quietly, and not have, not have a lot of the regular stuff during the morning going on because it would not have respected the children. ...there were probably ten different really, uh, delightful community people who uh were there because they were really smart about uh the autism spectrum. And they kindof did their thing, you know its not like they said let me study museums, you know we're gonna, you know, they came in and they did what they did well. [12:05] So we did what we did well, which was to provide the environment, minus light, minus sound, um, and um, and they came and uh populated the experiences.</p>
<p>how many staff are involved in the early open? What are their roles?</p>	<p>one other staff who assists just occasionally with it. And she would stay for the whole event. We have like the floor staff who is out in charge of the different exhibits. But its a minimum and my goodness I really don't even know how many. I'm trying to count how many different areas we have because I think we just had like one person in each area, or maybe less so maybe 10 to 20 just people out on the floor....last event we probably had maybe 50 volunteers, including the therapists because we do set up some, like we have a music therapist who sets up a table and then we had art therapy, we have a physical therapist and a play therapist and there's one other one and I can't remember the title- occupational therapist. ...I guess those are the main things in preparation I just clean up and I do the evaluation myself as well. So I basically do most of it ...So I have assigned the volunteers to stations. So this year we had, I think we had 8 people working together to check people in as they got there</p>	<p>there were people, you know at the back end that were taking the phone calls, you know the museums that were like a month out that took reservations, um did that so I couldn't even tell you how many people were involved in that. And then there was the lighting and heating person that was basically just one person, and then they did I think have 2 people at the um, ticket desk, and there were at least just 3 museum staff that would normally be there that day, they just came in early</p>	<p>I bet a staff of 35 people showed up that day, to pull that program off. Uh, and that was just all behind the scenes, haha...Rene created a pre-visit experience, she spent a whole lot of time making maps using maps, the graphic design team worked endlessly</p>
<p>is the early open being evaluated/ has been evaluated?</p>		<p>Um the museum did not, that's something they say they wish they had done. And there was since that time there have been 2 other events at the museum, but it</p>	<p>Rene did that...when you're in an executive administration position and you bring all of that staff time to bear, the question is &ldquo;how did this move our agenda forward?&rdquo; So that was a huge, huge</p>

		<p>didn't take off as well as I hoped it would but that's ok, I mean sometimes these things are slow to emerge, based on, you know whoever's there, so, because I wasn't employed by the museum- so there really wasn't a, there wasn't a champion within the museum, I was just a grad student with this idea, so until there was somebody actually on site that championed it it was a little bit difficult to take off.</p>	<p>question so that [14:00] was my accountability, was, you know, were these stakeholders happy and ___its wonderful this has happened, so what? So how does this impact your board of directors, you know, how does this impact your funders, is this going to bring new, really new program funding to bear, so those are questions that I was accountable for.</p>
<p>how the early open got started at your museum</p>	<p>it was just good timing between the 2 between autism speaks and the university approaching them at the same time and the museum wanting to do it as well.</p>	<p>from a Logistics standpoint, from the staff and the volunteers, and even the families that that was ah, a better option... we actually went to a workshop that they had, so this was like in 2011 maybe, um that was meant for museum personnel but I just asked if I could come, And everybody there, which was like not very many, 3 maybe, all used the early morning model ... just the Dallas Fort Worth area is the size of Connecticut, so I mean its big, and so I mean we had families that drove from 2 hours away... it feels to me that the museum would do better always offering in the afternoon. Specifically because of the context of our city.</p>	<p>our own internal team and then working with them in a way so that when they stepped forward they were really happy to be there. That was, you know we wanted, they felt special. Ah, to be involved in the program. <i>Though educators and one person on the board were keen to do this, she felt it was still a challenge to convince all the departments I think its that the main thing is, well, I think in any kind of leadership that its really about kindness, and you know, we're doing this because this is our mission. there's different kinds of learning, there's different learners, uh [17:00] we say we're learner centered so we need to be uh, you know, this is a program its within mission. So you know you can make a case, you know this is good mission fit, then people in the operations and maintenance and all of that, so they all come on board and say, "ok its my job." good collaboration takes a lot of time. [25:00] And good collaboration for first time programming- you go slowly and maybe you keep iterating and getting feedback about can we, is it ok, this over here, um thats what takes the time its the vision and the leadership and getting all the teams on board,... the museum, was really proud to do it.</i></p>
<p>motivation by the museum to begin an early open</p>	<p>there was really nobody to lead it, thats the reason I'm doing it totally by myself. But there was a researcher who had approached me about possibly getting a group of autistic people in so she could do her research and I said, well, maybe we could schedule an autism event.</p>	<p>so my capstone project, I really, truthfully, I wasn't interested in a museum program at all at the museum, I was actually interested in music therapy for non-verbal children with autism, that was really my interest and it was a really long story about why I chose the museum, my kids who are now adults, grew up, they have a - its called museum school and its just a school program for preschool kids and so my kids basically grew up in that museum...involved in Hands On Labs created by museum at her child's school...The university and the museum were trying to develop a collaborative relationship that if researchers wanted to use the museum space, to think about ways that we could</p>	<p>so when we set that as the standard, it probably took us, gosh, that's where I would say um, "wow, go into this eyes open [21:00] because the first time, and I would say had we repeated it- I think we've done it a couple more times, the first time is what takes all the time, and it took a whole lot of time. I uh if, I I'm gonna ask my, ah, you know, I've got all the documents that was all the hours, all of that kind of stuff and I'm sorry I don't have that for you. Uh but just um, I would say, an extraordinary amount of time, and if we had to put an average dollar for every hour it was that person took, you know to get ready for that, we lost a tremendous amount of money but it was never about money, you know it was- when you're in programming you do, you know you get this- you start plowing the earth because you know its A its the right thing to do, B its mission, and C you hope that our,</p>

		<p>do that...I realized nobody in my cohort was doing anything with the museum and I thought ok, my director has spent 5 years developing this relationship with them, and they offered this opportunity for us to collaborate with them and I thought it would be truly a tragedy not to take advantage of that, as the first cohort and because I love the museum so much so it felt like alright I don't want to do my capstone here, but I could certainly do a small little project here....So it was truly just a random comment, that made me think about well, if I wanted to study music therapy, like how would i even do that at a museum? It turns out that wasn't even feasible but its one of those things that when you think about research and you think about what you're doing sometimes conversations come up that lead you down a different path. So that is exactly how my capstone came about is that I realized that this was something that could be done and it was really hugely beneficial to the autistic community, and I was a teacher,um, and I worked with non-verbal kids on the spectrum, so my heart knew the troubles that their families have, and I have my, I have an adult son with Aspbeggers so I knew, even though he's really high functioning, I still understand the autistic community and those needs and I thought no matter what I wanted to do with the non-verbal children, this was a bigger deal, like I could impact maybe one or two people with my little tiny capstone [music therapy], but creating a program that would impact communities felt good to me and so that's why I did that.</p>	<p>the program is a viable community program and that there will be people, you know who step forward to help the museum [22:07], we're non-profit, there will be people who step forward, to help support all the costs. So we had none of that first time out.</p>
<p>how the early open got funded?</p>	<p><i>first one didn't get funded, had to charge discounted admission. We should be hearing back any day now from one of them and then the other one we won't hear back until December so I won't know for a while. I'm hoping that we'll get this one (Lockheed Martin Corporation) renewed, that we had last year and we'll have another again in September. That's our goal.</i></p>	<p>when we were in New Hampshire, Paula is her name, probably still there, one of the things that they said and it would be the same for the evening is that opening early didn't cost them any more money because they opened at a time that the staff is normally there, but they're doing things within the building. So like the air was already on or the heat was already on or the lights were already on because staff was there in the building</p>	<p>we started selling tickes I wanna say three weeks before...we didn't wanna we didn't wanna create any barriers, to oppor- you know to opportunity- to engagement, so we, I think that is what we, uh, charged, five bucks.</p> <p>that was the thing after all of this happened, that I was the most stunned at, it was aha, no, there nobody said, that I can remember, No foundations stepped forward, I think our department- our development people perhaps put a couple small feelers out [28:02], nobody stepped</p>

		mabye just not on the floor. And so that really didn't cost them anything else to do that.	up, which was a stunner. Cause that was, I must be honest, that part of our motivation, because you know when you're a non profit you wanna do these, absolutely these wonderful service for community, that's your job, but you need somebody in there to help underwrite all of the costs. The, you know, the hidden costs	
general staff accessibility training	We did one before the very first one, it was mostly with the managers		I just can't I just can't tell you how wonderful Debbie and Rene were, how what they brought- uh that's another thing, normally museums don't have that expertise. And it was a gift for us [30:00], I cannot tell you what a gift it was that one of our trustees, actually had funded this whole UT center, UTA center and they brought tremendous intellectual capacity that we didn't have. We never would have stepped up on our own	
training for staff specifically for this event?	And then for the volunteers I did do a short training. Just for, just immediately before the event. But most of the volunteers were already involved with the autistic community in some way.	we need to take a step back and see that not all behaviors are just because parents have bratty kids, you know, its like you need to kindof be aware of why children have behaviors to begin with. [20:00] I mean that there are antecedents to everything and just to really keep that perspective.	they did that- they helped prepare our team so well, um uh you know Rene did like a pre-visit she did, oh my gosh she just did such wonderful stuff, you know for parents who were going to come like a pre and post thing it really was terrific	
If yes, please describe.	What to expect from the children just to make them aware that they might have meltdowns. Kindof how to watch for triggers, how to respond, um, and also kinda how to in general to approach a child with autism, where as you might tend to go up and pat somebody on the shoulder you wouldn't do that with a child with autism because that could set them off pretty quickly from things like that.	Wanted to go over: I think it was Easter Seals had a good little video and we got this from Paula actually at the Children's New Hampshire Museum. So it was a little video on what families, specifically what families with young children with autism who are severely impacted like thier world view of what life is like and how chaotic it is and mostly focusing on that they don't get the chance to have experiences like other families do, a lot of times and that that actually has an impact on their entire family because then neurotypical children also do not have those benefits. So it impacts more than just the child with autism. And then there's like the financial burden, so looking at the family dynamic, that thats a need that museums can address. You know, in a very, in a veyr easy way. Um so that was a big thing and then looking at um the sensory needs, like why would we need to turn down the lights in this particular exhibit and why would we need to um disable the sounds in this particular exhibit so for instance, there was a hurricane machine, I don't know if you've seen it but like you step inside, and try to catch money or grab money or whatever and its HUGELY loud, like	but no I do not remember I what I do remember is they brought in like 6, 3-6 women, who walked through the museum who gave us the "here's what your people have to do to make your museum um, spectrum friendly.	

		its annoying to me, so we said that this is something that could potentially be, that a child, could like, turn off a lot of people, so we need to think about things that we think should not be accessible during this period. Because not everybody even understands that those sensory needs, so addressing thier sensory needs, addressing the family needs, and then a little bit about behavior, like why a child might stem or why a child might scream so some specific behaviors that they might see, and what those mean,		
Who gives this training	<i>for staff, Deborah</i>			
Who determines the training content	Deborah			
How long is it?	An hour or less			
How often is it offered?	just before event			
Is it required or optional?	Optional but highly encouraged.		people who are on the floor interacting in exhibition, likely they were highly highly encouraged to come	
Do you participate?	yes			
What did the training focus on?	<i>Person First language(I had to tell her what it was) Oh. no I didn't. Focus on understanding people with ASD? Yes hands on/ role play? No. giving clear directions to a person with autism? Yes.</i>	Yes, definitely person first language goes with all disabilities, and role modeling we didn't consider although I can definitely see that would be beneficial, we definitely talked about the running and we did get that out- that's why we positioned people at doors, just to keep the child safe, and not , you don't stop the child, you don't try to touch the child or whatever, you just position yourself there and brace the door so that they can't get out...age limit or not determined by museum, chose there to be none during this time, but did not address teenager inappropriate behavior. The other thing we would have talked about is that, for we sould have said but we didn't get to say that its a spectrum, and so you might see somebody here that you feel like, "Oh I don't think they have autism, maybe they shouldn't be here" that its a spectrum and so you're gonna see everything on that spectrum, and that includes you might also have a child who has other disabilities too. Youknow, with in that. Kindof like a mini- "this is special Ed" if you can do that with speical ed, in a training session.		
does the museum now or has ever partnered with any other organizations in planning	I think we maybe had ten institutions that were involved and then we had some others that came and were not on the advisory board, there was at least one other university and some therapists from other areas so I would say , probably total of ten to fifteen that were involved at the last event. Planning process? Yes, most of them. And I think that is a key factor I think that is very important.		They had Autism cares and there were probably 5 other partnerships they brought...first time partners.	
If yes, what kind of organization?	So we had several universities some of the autism centers in the area we had occupational therapy, again the list is in the advisory board list, the child study center is listed in there	New Hampshire is really big into doing visual schedules and a map and they even have a room where parents can go in and you know make their own little visual schedule, and they do it all the	They were implementation, they were planning, they came that morning, and they did stuff,...You know somebody did singing, somebody did bodies	

		<p>time, we decided that that wasn't necessary and even Paula said honestly, not that many parents use it, and so one thing we did is we did provide a map in advance, of the areas of the museum and we provided a social story. That they could access online so if they wanted to kind of pre-walk through with their kids, ...just a really simple social story, so that one one simple thing that we did and some parents did say that they used that and other parents didn't but that's you know [25:16] not everybody needs a social story so that's was expected too...I mean a lot of what we got was from the New Hampshire workshop that just seemed to work and then we also went to the Children's museum in Houston, had an autism day and we went to that too. And they did less sensory modification, they just, I think on their map, if I have it correctly, they noted on the map like high sensory areas like this exhibit will have loud noise, that sort of thing so that the parents could make that decision. But its a really big museum...From our the guy at our museum who does the lighting and heating and everything he said actually it was a very easy, that was a no brainer like cause everything's electronic, like do I want the lights high or low here, you know, do I want the temperature High or low here, he said that was a nothing thing, so and the feedback we got was, so one of the museum staff, she's in charge if think of Education said, Of all the programs at the museum they've ever had of any kind, this was by far the easiest, and required the least amount of work from anybody on the staff.</p>	
Organizations that engage with people with autism?			
What is or has been the role these partners play in the early open event?	<p>we had two meetings, beacuse they're all busy and some of them are coming for an hour away so I didn't want to give them too much so we had two meetings just to discuss things like what we would call it, we did change the name this year, the first two events were called play for all and we changed this to Sensory aware saturday so we talked about the name, which sounds like trivial but its important for the marketing, um, we talked about how many therapists would</p>	<p>interestingly enough the museum and I had alread come up with something that we were going to do, and then Autism Speaks later came in and said, have you ever considered maybe having a program at the museum, and they said, well as a matter of fact we ARE going to do one, so lets put you in touch with Rene, so they did get in touch we me and I kind of ran through my program with them, and they were happy with what we were doing and they said whatever we can do, so they were good at getting the word out through their network, you know, just putting it on their website and whatever so that was really beneficial, and then they were there that day, we had kind of a providers area set up, with some occupational therapists, we didn't let them like, sell their program or whatever but just like, if you have questions we're here, because one thing that I found out from being a teacher is that people assume that parents have all these resources available to them, and they do, but the parents don't know where to go to get them, and it certainly doesn't happen in an IEP meeting I can tell you that... its really tricky to</p>	

	be good how many people to include, a lot of what they did was kindof um, saying "this is what I'm thinking of doing, what do you think";and a lot of times they would just agree with the things I had already put together, mostly- I don't know that it was as important for their input as for the connections that they provided. And just their general support, and just kind of letting them know I wanted them to be a par	make sure it doesn't turn into a sales pitch, because then the museums can get in trouble, but just a little bit more than a flier so if they have true questions there is someone they can talk to, but definitely not a sales pitch. more like confirmatory, here's what I'm thinking, and kindof just like, yep, that's right, that's what we do, so which I felt was hugely beneficial because you know I was just making this up in my head without really knowing, so and they did tell us- so one of the things that we did do, so Dallas Museum of Art has a great autism program, and they did tell us about that and they were having one when we talked to them like a week or two after that so that was great for us to go observe that, and to kindof see like, yup, that's what we planned. So a lot of what we thought about, just going to those other programs, didn't necessarily change anything we did, but it sort of validated like, yeah we're on the right track. Like we think we've got the pieces here, and truly, I don't mean to say this sarcastically, its NOT that complicated to put this on, when you think about the logistics of what has to happen its just pretty simple, really, you just have to think about UDL really, its just like if we make things accessible for those who need it we make things accessible for more of the public too. But if you're not trained in those kindof ways of seeing the world, and that's where I came from, thinking that well everybody could see this makes sense is that knowing, no, not everybody sees that and there is no reason to expect that they would	
did the museum contact any of these groups, or did any reach out to the museum during the planning process or after the early open began?	I contacted them. [40:29] I contacted each of them individually.		
Did the presence of a local group that advocates for or works with people with autism have any influence	just my opinion I think it probably does...I have a sign up sheet on the table where they can sign to get information about the RLC and I have a a blank on there they can check if they want to get information about autism, and a LOT of people check that	the Museum Access Consortium in New York had just finished a training session and they had the transcripts online so I read that and it didn't add anything to what I learned but it validated the things that I was hearing, so it was like, ok we're all kinda talking the same message. So that was good. And I would say that they are, the museum access consortium, is a great resource to go to.	No, it was time for us. We needed to do this...it was Rene's passion that this happened
Were there autism related events at other museums that served as an inspiration	Well the Children's museum of new Hampshire Definitely and then there were a couple others, before we did the first event we visited several museums from Ohio to Houston, and got some different ideas.	th ebrooklyn children's museum I think too, we also went there for theirs was like a sensory day, they didn't necessarily call it autism, and that is something else we found out, we did name it- we didn't say specificaly autism, we said sensory day because what we heard from a lot of people was Well then you're disenfranchising the visually impaired or you're disenfranchizing these other communities, and that could be true. I'm definitely not saying, because one of my best friend's son has spinebifidous, so I'm NOT saying that other communities don't have issues, but if you have a child in a wheelchair with spinebifida, everybody can see	yes, but I think it was knowing that Dallas was so, I mean Dallas! Was quite mature in their programming. [37:13] So there was a what- c-you know, Come On Fort Worth lets get it going!, uh and we were not going to step out until we had the appropriate leadership with content, which Rene and Debbie brought.

		that child, and there's certain expectations that they have of what that child can or cannot do, so they give allowances for that, if you have a child with autism who LOOKS normal and then is having these behaviors, for the family that can be devastating and there's plenty of research that shows that the stress levels on the families. Its because they look normal, they don't have a sign that says, "I have a disability" even though I hate that word, I wish we could change that word, but that's the word we have for now so.	
Were there articles, reports, or blogs			we had a board member who really [38:00], ah was an extraordinary advocate for the relationship with UTA SO um, that was a big investment for me um, hah so its like yes, I'm gonna do whatever I can to make this work.
Were there autism related events at museum panels, workshops, or presentations at a conference that served as inspiration or a resource for you?	Probably but I can't think of any right now.		
	The second event I pretty much followed what she (Rene) had done, the third event I made some changes based on what I had seen from being in charge the previous year.	<i>it is necessary for someone on the museum side that is creating a program like this to have a professional training</i> Absolutely. Absolutely, and I feel like, this is nothing against the museum but we had developed a really, we felt, a really good training program and we thought, you know being respectful of their time we thought OK, we really need to do this because they need to understand from the families perspective and behaviors that they might see and so not freak out about that.	
		I think it takes somebody from the inside championing that who truly understands the need, the necessity, and how that benefits-how that goes back to the community, like that's a public service thing that is a good, if you wanna have a selling point its that "yeah its good for the community" yeah ok, great, but it also makes you look pretty good in the communities eyes.	they were such high quality partners. That none of this, it wasn't difficult [23:00], it was intensely time consuming, uh and you know when you work with so many different departments its always about bringing people on board and helping them understand and and new collaboration, ANY new collaboration, uh, can take a whole lotta time and i think this one was unique because in essence it asked the museum to be not what we were.
		You should talk to Paula at the Children's New Hampshire museum... she's a real driver in this... and she's even created since then, a program for individuals with Alzheimer's, Her outlook is definitely like you know we're a museum, and there's is specifically a children's museum, but its like,	I was glad I was as far along in my career as I was, I was glad I had the executive leadership position, to me it would have been tricky if I was perhaps a mid level staff person, to try and move this forward. Uh, because it just took, there was a lot of navigating,

		<p>&ldquo; we're a museum but we're a place that is situated in the community, so we belong to the community and the community is us and how do we best serve everybody here&rdquo; is kind of her outlook on life and I love that outlook.[41:00]para phrase:They created Research and Learning Center after capstone and influenced/ inspired &ldquo;on outreach of&rdquo; New Hampshire Children's museum visit. They have living Labs NSF grant, &ldquo; And if you ever get to host one, just watching the families, you'll be like yeah, whatever I went through was worth every minute of this.&rdquo;</p>	
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Document Analysis

West Coast Museum		
email between PFYD and Renee Gervaise	asked about	filming, space (no tables in theaters), registering attendees, and tweaking evaluation.
PFYWD questionnaire		asked about satisfaction/ increased understanding, action step " what is one thing you will do differently as a result of this training?" as well as open-ended question "7. What further training you would like to receive (including training on a specific disability)?"
Front end evaluation for potential visitors	42 participants, November 2014	findings: barriers mentioned were crowds, uninformed staff/ visitors, triggers for meltdowns. 67% of respondents had never been to an autism event at a museum. Those who had reported the most rewarding aspect was being around families who "gets it." and reported challenges with difficulty explaining transitions and the early hours. 79% visitors were not aware of resources. reported interests led to eval suggestion for Planetarium (which was implemented) and tinkering tank and insect carts (which weren't). concerns included cost, how the staff would react to melt-downs/ slow comprehension, request for " to include parents, from someone very significantly affected to a parent with a child with few sensory needs, on a panel during your training. I work with staff all the time and they need to connect personally with a topic before they'll really absorb training in a meaningful way."p. 8 also, ****"Continue asking about accommodations. And realize that you can't please everyone! The fact that you are caring about autism community by making reasonable accommodations and seeking to understand is simply great. Thank you."p.8
formative snapshots jan and march 2015.		April event had Northwest Special Artists there for Autism Awareness Meet and greet, only one respondent had visited.
Summative eval report	65 visitor interviews, October 2016	findings: to look at how and why visitors engage, what they get out of experience, and impact on families. half have been to more than one early open, only 1/3rd to PSC regular hours in last year, "The event has given them a space to interact and talk about subjects they're interested in, especially the live animals, dinosaurs, and outer space in the Willard Smith Planetarium. As a result, they have learned about each other's interests and curiosity."iii, "Moving forward, continued success will depend on a focus on positive staff interactions with guests and the maintenance of the uncrowded, calm environment that so many mentioned as being crucial to their experience. Improving communications related to

		<p>parking and finding the entrance would help improve families' experiences. Additionally, many lessons learned during Exploration for All can be used to improve the guest experience during regular hours, including improved signage, training staff to talk to guests of all abilities, and hosting the planetarium as an open house. The Science Center thanks Safeco for its continued support for this program."iii, Parents heard about the event through service providers (including Northwest ABA, the UW Autism Center and the Arc of King County+ parent map. " Parents were reassured by the fact that staff had received training. One parent commented: "I heard that the staff got trained and that makes me feel really good. In other place they don't know how to work with kids with special needs." p.9 and that staff reach out to engages with kids. "About half of respondents (45%) said that there were no difficult parts of Exploration for All."p. 12, interesting conversations/ interactions with live animals and planetarium. " four-fifths of parents (81%) thought that their family members had learned something about each other. They learned about each other's interests, abilities, or curiosity. In many cases, being in an environment that's different from their normal life allowed individuals to learn new things about each other" p.17</p>
staff accessibility training evaluation	112 (2014)	<p>staff reported agree/ strongly agree that training helped them define inclusion, understand inclusive language, felt more confident using person-first language, found most useful the person first language, "practical" how-to aspects, activities and discussion, and other(short and sweet). staff wrote that they would use person first language, or be more intentional with body language. 63% answered question about what further training, 44^ wante dmore in-depth specific, 24% how the SScience Center could better accommodate, 13% wante dtraining specifically on children with disability/ autism, 19% other " not sure" but wanted to learn more. Usefulness of advanced training- 62% Strategies and scenarios, 18% talking with each other, 13% general learning, anticipated change in behavior: 49% specific facilitation behaviors, 37% greater awareness of people with disability, 8% plan/ strategise. further training: 48% in-depth strategies and applictaion, 39% more in depth content about different disabilities, mental, physical, learning.</p>
E4A handout for staff/ volunteers.		<p>safeco insurance volunteers on occasion!, describes parameters of event, when cafe opens, etc, who point person is for staff, and for questions about funding. Back of Page is info about ASD. created y Niki Melchoir, 2012, updated 2014.</p>
stakeholder handout		<p>describes goal of event and grant from safeco. resources (sensory map) staff training and plans to evaluate. " Estimated attendance 300 per month"</p>
follow up training evaluation	25 (2015)	<p>36% found most useful the tailored scenarios to PSC experience, 20% (5) thought role playing most helpful, 20% (5) group discussion, 20% (5) content focused. suggested improvements to training: more interactive, more strategies, optional role play. 26% more time. anticipated change behaviors 40% shifts in language use, 28% how to approach visitors, 20% importance of asking about a visitors needs, 20% identified specific strategies. further training, 57% nature of specific disabilities 52% specific strategies, like ASL dealing with disruptive behaviors.</p>
PFyWD	behavioral scenarios	<p>described on sheet as "case studies" classroom based, variety of diabilities.</p>
	non-verbal behavioral scenarios	<p>Seem like prompts to use inclusive language. "A participant who has difficulty speaking due to a disability comes to your office to ask you a question. How can you communicate with him and ensure you understand what he is saying?"</p>
* mini-special ed	disability categories	<p>descriptive word, text, and examples of conditions that relate to it- "Developmental disability-> autism spectrum disorder</p>
	disability ettiquette guide by United Spinal Association, n.d. 36 pages	<p>included insturctuions, " don't make assumptions" and descriptive text and some cartoons: what to do, what not to do. started with wheelchair also goes over HIV & AIDS, "psychiatric disabilities (Mental Illness)" pg. 27. Service Animals, signage.</p>
	email thread	<p>about send powerpoint and materials to psc agead of time. arranging logistics like large post it notes on easle.</p>

	powerpoint	agenda shows "What is inclusion, inclusive communication, inclusive etiquette, case studies, questions and evaluation" 11 slide. defines inclusion as "A pro active approach and belief that every person, regardless of ability or background, can meaningfully participate in all aspects of life."
June Letter	press/ marketing release and quotes from visitors	focus on time and free cost, not on inclusive adaptations etc. facebook notice: "Families with children on the autism spectrum are invited to explore @Pacific Science Center on the second Saturday of each month before opening to the public, free of charge through the program, Exploration for All: Autism Early Open, presented by Safeco Insurance. The next Exploration for All will be held on Saturday June 13 and June 20. Learn more here: "
.	person first activity	1 page with non-person first language and then empty space for people to write in corrected language. "she's autistic and "there's handicap parking"
FY 2016 grant application	2.5 pages to continue E4A and start low/ no vision focus groups.	"... aims to expand its accessibility and inclusion efforts by continuing our Autism Early Open program, institutionalizing inclusion training, and conducting focus groups to evaluate our exhibits for visitors with low or no vision."
	no metrics from grantor,	self-defined metrics from museum "Number of Autism Early Open Days (12) Attendees: 2400 Number of Staff Receiving Professional Development: 50"
FY 2015 grant application	2 pages	describes existing accommodations: "We have already undertaken some projects aimed at increasing our accessibility and inclusion efforts including wheelchair services, complimentary admission for aides, autism resources, TTY telephone service and some closed captioning devices in our theaters, but are eager to add additional resources to help accommodate guests of all physical, cognitive and emotional abilities."
	Describes new training promoting positive behavior. Follow-up training with front line staff to support efforts to utilize."	:" Basic inclusion training for all staff to increase their understanding of inclusion, disability etiquette and inclusive communication. Additional 3-hour training sessions for front line staff focusing on the characteristics of and supports for various disabilities, understanding the ADA and accommodations, and strategies for declare measure of success:"Success will be measured through the number of visitors who come for Exploration for All" also self-defined metrics "Number of Autism Early Open Days (11) Attendees: 3,300 Number of Staff Receiving Professional Development: 150"
FY grant 2017	3 pages	action for low no vision/ continue E4A" As recommended by Genelle Thomas, Partners for Youth with Disabilities, we are starting with critical issues related to guest safety. This includes setting handrails at a uniform height, adding high contrast transitions to carpet where there is an elevation change (example of a space with an elevation change included in supplemental attachments section), adding tactile maps. " Changes to E4A " The programming team will now fully run these events. This will ensure that floor staff are aware and training for the event continues on a regular basis. * Institution wide we are increasing staff on the floor. This is resulting in an improved guest experience. Autism Early Open will also have a higher number of floor staff that we expect to result in an increase in repeat visits."
grant check in meeting, with training schedule 2014		"need lead to act as point person for staff and volunteers working on these days"... "Marketing Plans pre/post – See Elin Launch Planning – Media event – See Elin/Crystal"
Spread the Word Fact Sheet. 2014		"Spread the Word to End the Word is an ongoing effort by Special Olympics, Best Buddies and our supporters to inspire respect and acceptance through raising the consciousness of society about the Rword and how hurtful words and disrespect can be toward people with intellectual disabilities. "
Strategies to support youth with disabilities ppt.	overview:	Characteristics of and Supports for Specific Disabilities
		Support Strategies
		Handling Challenging Behavior
		Behavioral Scenarios
		Q & A

		Evaluations
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Gulf Coast museum	
Graduate Student work	The Dallas Museum of Art has hosted programs quarterly for more than three years with average attendance around 250. •Fort Worth Museum of Science and History's event attendance was 141. Some families drove for over an hour to attend 1 ½ hour event which started at 8:30 A.M.
Poster for Quito	Feedback from families of children with autism, staff, and the community is number one driving force. •Consultation with specialists familiar with autism is critical. •Staff awareness of autism is critical. •Compared to other events little preparation is needed. •Fiscal gain was of lowest importance
Story Guide	not narrative, individual photos and phrases/ actions
general information doc	for parents, described where to enter, why limit for number of guests etc.
interview guide	asking other museum profess, about how they started the event, what they know about ASD>
Museum documents	
Flyer 2016	same as website- limits to 250 ppl.
ASD workshop feedback survey	there are only 4 participants, 2 parents, 2 professionals. 1 remark that the workshop was too focused on teachers, and some comments on the need for more in depth practical skills.
advisory board list	2 people from museum, everyone else from university or research center. only center semi- affiliated with parents is the Hope Center, which emphasizes ABA and the idea that autism is "reversible" + bible verse.
parent feedback totals, 11 participants.	satisfaction/ enjoyment.
Sensory Aware Saturday Volunteer feedback survey 2016	3 of 11 surveyed thought more accommodations were needed. the music therapy was too loud, the rooms too dark, the time too short. ; 4 did not observe sensory centers. presented in a way that makes it very unclear what the parameters/ design was.
Sensory aware comments and photos	not many new comments, 3 about offering more events.

East Coast Museum	
Final report 2013	report to Autism Speaks on project to " (1) completed an initial assessment of its facilities, (2) conducted staff training, (3) formed a Parent Advisory Council, (4) delivered eight family programs that served 380 participants, and (5) worked to increase the capacity of cultural organizations who provide programs for children within the autism spectrum and their families by leading conference presentations locally and regionally, and preparing a replicable "toolkit" soon to be hosted on the Intrepid Museum's website"
social narrative- 22 pages. narrative for museum visit. identifies staff.	
sensory map	5 pages grid structure, large pictures and icons makes it possible to use as schedule.
visual vocabulary- 6 available on website. single page grid/ flashcard style photographs and words.	These versions are for self-guided visits to the Museum. If you reserved a guided program, please email access@intrepidmuseum.org to request a customized version for your group.
directs visitors to video gallery	
resources include Sensory Bags	Bags include noise-reduction headphones and fidgets to help ease sensory stimulation. Visual vocabularies and checklists, scavenger hunts and activity sheets are also available at the Information Desk. These resources are also available during all public programs
verbal description/ tactile guides, assistive listening devices, audio guides, lightweight stools.	
Autism Advisory Council	"...It was a pleasure to see how our ideas, concerns and issues were quickly embraced, to help create more amazing future tours for all children. I can't wait to see all the new ideas and projects during future tours.' –Parent in the

	Autism Advisory Council"
describes specialized programs (and link)	"All specialized programs for school, community and family groups include enhanced sensory opportunities and support both social-emotional and academic goals."
Description of early morning program	"On select weekends and school breaks, the Museum opens its doors one hour early for families with children on the autism spectrum. Educators lead short, interactive tours designed for the whole family as well as drop-in art activities and structured play opportunities. These programs are free, but space is limited."
Flyer fall 2016	