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PROGRAM EVALUATION

SOCIAL STORIES SPECTRUM PROJECT

Prepared for the
San Diego Natural History Museum
San Diego, CA

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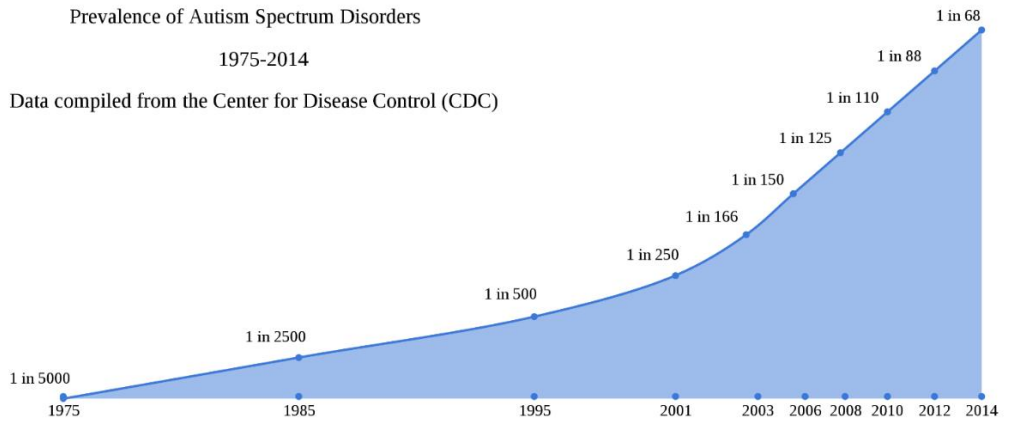
SUMMARY AND DISCUSSION

The SPECTRUM Social Stories Project launched by the San Diego Natural History Museum (The Nat) in collaboration with the museums of Balboa Park produced useful information about how museums might support and/or collaborate with young adults with an autism spectrum disorder (ASD). As noted in the proposal to the Institute of Museums and Library Services (IMLS), “Though museums work to design inclusive environments that reflect universal design parameters, the field is unprepared to accommodate the growing number of adults with ASD.”¹ As such, the following summary and discussion highlights findings that RK&A, the independent evaluators contracted under the grant, have determined most relevant to the learning of the museum field based on the project goals.

The findings discussed here are those we consider most salient to learning in the museum field. Please see the remainder of the report for a comprehensive presentation of findings.

¹ Quoted from the proposal written by San Diego Natural History Museum for the Institute of Museum and Library Services’ Museums for America Community Anchors grant program.

CHART INCLUDED IN THE NAT'S PROPOSAL TO IMLS



HOW THE PROGRAM SUPPORTED YOUNG ADULTS WITH ASD

In approaching this project, the Nat articulated three specific goals for young adults who participate in the program.

- ◆ Participants feel and know they are contributing to society and their perspective is valued.
- ◆ Participants build social skills and communication skills with their peers and with museum professionals.
- ◆ Participants build confidence and self-esteem.

STRENGTHS

Overall, the project was successful in supporting participants in all three goals, most noticeably in building social and communication skills as well as confidence and self-esteem. The evaluator observed participants across the programs becoming increasingly comfortable communicating among themselves without prompting or facilitation by program staff. Supported by staff's scaffolding, participants were also observed taking initiative in developing the social stories as the program progressed. Furthermore, some participants self-reported that they were better able to express themselves as well as look outside themselves to become tolerant and empathetic to others' differences.

The Nat's attention to detail in creating a program environment that was welcoming to young adults with ASD was notable. This included creating a meeting room that was sensory-appropriate, such as purchasing soft-lit lamps for the room. Each meetup progressed in generally the same format, which gave participants a sense of what to expect each time. In addition, the program staff were sensitive to having a core staff team, including an occupational therapist, that could provide individual attention to participants as needed. **Explicit feedback from participants about the environmental aspects was limited, but participants' actions during the program, such as utilizing the provided fidgets, suggest this environmental attention was important.**

Taking all aspects of the program into consideration, the way program staff responded to the participants with attention and care seemed most important in supporting young adult participants in the aforementioned goals. Comments on the feedback form, particularly as related to building confidence and self-esteem, emphasized how staff took a genuine interest in participants' passions and ideas. These comments both spoke to a familial relationship among the group, such as when one participant noted that staff "show a loving interest," but also a professional relationship, such as when one participant noted how "staff listen to our contributions seriously." **This personal interaction among staff and participants seemed critical to supporting young adult participants.**

Furthermore, the program structure itself and staff's support of it also helped foster comradery among the young adult participants, which is something participants highly valued about the program. As the meetups progressed, young adult participants were increasingly "attentive" to each other's needs, and regularly offered support to other participants during meetups, such as when one participant was observed reminding staff and peers that some in the group may need more time to process and respond to discussion questions. And, as participants bonded over their shared experiences with autism, they passionately rallied around social stories as advocacy. Also, some young adults eventually formed relationships that went beyond the program. They texted, played online games, or hung out outside the program; for instance, the evaluator observed several participants sharing coffee at the museum's café well before the day's meetup.

CHALLENGES

One area that may need greater attention is in helping participants feel and know they are contributing to society and their perspective is valued. So, while participants felt they built social and communication skills as well as confidence and self-esteem, it did not necessarily translate to strong feelings that they were contributing to society. This disconnect may be owing to how young adult participants conceptualized their work during the program. The application advertising the program emphasized that participants would work to “co-create ‘social stories’ that will prepare individuals with autism to visit museums in Balboa Park,” and the Nat initially planned to make social stories for numerous museums. For some of the participants, the job of helping museums became very literal in their mind. For instance, one noted that payment for their input/expertise would be nice but not necessary. Another participant said they sensed the project was “mostly envisioned,” suggesting participants felt they lacked the control to make changes they deemed necessary. These feelings seemed particularly acute for participants who were motivated to participate in the program primarily in the service of others with autism (versus building their own skill set). These expectations may have hindered participants from fully feeling valued.

Similarly, another barrier to participants feeling and knowing they are contributing to society relates to what “co-creation” looks like for this program. For instance, in the beginning of the program, staff provided a great amount of scaffolding² for project work and social communication; but over time, staff provided less, which seemed successful given the group dynamics evident at the end of the program. Program staff regularly reflected on this approach to “co-creating” project work. Yet, staff expressed concerns about if/how to encourage agency for participants to structure the program design (e.g., agenda, activities). And, several participants suggested providing participants’ greater license to control the program’s structure, such as simply giving them the authority to suggest activities to break up the day. **Perhaps allowing participants to have greater input on the day’s agenda, goals, and the process of achieving these goals would have promoted greater feelings of value in participants’ perspectives.**

Lastly, program staff may further narrow its criteria for participant recruitment and/or make the program structure more inclusive to less-verbal participants. The program application specified that the project sought: “high-functioning verbal young adults, 18-25 years old, with autism, and who can participate in activities without the assistance of a parent or aid.” Staff recognized that these criteria would likely result in a group of participants that ranged in abilities and needs, and it did indeed. Some participants required more time, comfort, or support to process and join in conversation verbally, and thus did not seem able to participate as much as desired. This was problematic as the program heavily relied on verbal communication—both for participants to interpret verbal communication and participate verbally. **Program staff may consider their capacity to make accommodations for participants to contribute in multiple ways, or become more rigid in their selection criteria—at the least, make participants deeply aware of the reliance of the program on back-and-forth conversation to reduce frustrations among participants.**

² Scaffolding is a technique based on Lev Vygotsky’s Zone of Proximal Development theory, which refers to the difference between what a learner can accomplish on their own and what they could accomplish with support. The facilitator must understand the learner’s current thinking and build upon in a way that proceeds ahead of the learner’s development.

HOW THE PROGRAM SUPPORTED MUSEUM PROFESSIONALS

Museum professionals were a secondary audience for the project. Museum professionals include both the program staff who were intimately involved in designing and leading the program as well as partners from other museums in Balboa Park whose involvement in the program was limited to a workshop, project updates, and some exposure to young adult participants when they visited their museum. As such, the two subgroups had a range of experiences related to the following goals:

- ◆ Gain awareness and knowledge of adults with Autism Spectrum Disorder (ASD).
- ◆ Learn to successfully engage young adults with ASD.
- ◆ Increase sensitivity towards the needs of adults with ASD.

PROGRAM STAFF

Program staff self-reported growth in all three of the goals above given their experiences in designing and leading the program for young adults with ASD. They indicated greater need for growth in being able to successfully engage young adults with ASD. Notable though, this concern emerged across program staff regardless of their depth of experiences with individuals with ASD. In particular, staff questioned when and what level of support to offer participants, especially considering staff's encouragement for participants to self-advocate as the program progressed. Staff also wondered what successful "engagement" of young adults might look like, as staff did not necessarily require them to participate in a certain way. For instance, one staff noted, "How do I look at this?" in reference to a young adult who contributed to group discussion from underneath a conference table. The staff noted conflict between feeling positively that this participant found solutions to help them actively contribute in the program, and wanting to help prepare participants for real-life situations, in which they may not be permitted to actively contribute to a conversation from underneath a table.

Despite this, a major goal of this project is learning. So, while staff may not have come up with clear solutions to what successful "engagement" with young adults may look like, all staff developed a deeper understanding of autism as a spectrum and expressed an interest in applying their new knowledge. Indeed, with the findings from this report, we encourage staff to reflect back on this project, including to consider more concretely how the intended goals for young adult participants with ASD might manifest for the audience (e.g., what does it look like to engage young adults with ASD?). **For the benefit of other professionals, we also encourage staff to further consider how this project structure, which was conceptualized with the intent of being mutually beneficial to young adults with ASD and museum professionals, benefited each audience and in what ways it, as well as presented challenges.**

MUSEUM PARTNERS

As noted, museum partners had more limited engagement in the program, and thus growth in the goal areas was also more limited. Overall, partners gained an awareness of adults with ASD as a result of a workshop at The Nat, although some had prior experiences working with ASD individuals. However, partners looked forward to expanding their knowledge and in particular learning ways to engage young adults with ASD in the dissemination of this project to a wider audience. And if staff capacity to lead the program grows, there are opportunities to further engage museum partners in the future. For instance, museum partners said they would have enjoyed more project updates to learn from, and one program staff saw greater opportunities to integrate partners into the project through listening sessions with young adult participants (which might also contribute to young adult participants feeling valued).

CONCLUSIONS

We believe the immense amount of learning that resulted from this project can promote stimulating discussions in the museum field about what it might look like to respond to the growing number of adults with ASD. We agree with The Nat’s early assessment that museums need to take steps even beyond those of universal design. Further, while this study showed that creating environmentally sensitive spaces can help museums become more welcoming, the genuine person-to-person interactions are also critical. Some generative questions for potential exploration in the future:

- ◆ What might it look like to “take steps” beyond universal design? How might co-creation play a role in helping museums better serve adults with ASD? What would “co-creation” look like/what form might it take?
- ◆ What does it mean to successfully “engage” young adults with ASD? How might engagement be defined when considering young adults with ASD as a distinct group, but whose individual members have their own distinct needs (i.e., if you have met one person with autism, you have met one person with autism)?
- ◆ Are there indicators for staff to know how much support to offer young adults with ASD and when—particularly when considering a program that aims to build skills among the participants?

STUDY BACKGROUND

With a grant from the Institute of Museums and Library Services (IMLS) and the National Foundation for Autism Research (NFAR), the San Diego Natural History Museum (The Nat) launched the SPECTRUM Social Stories Project in collaboration with the museums of Balboa Park. The project brought together museum professionals and ten young adults with an autism spectrum disorder (ASD) to create social stories that help others with ASD visit Balboa Park museums. RK&A was contracted to evaluate the goals of the project for ASD participants and museum professionals.

PROJECT BACKGROUND

The Nat recognized that, while museums should be an “ideal place” for someone with an ASD, museum environments and experiences can be challenging for individuals on the autism spectrum. Museums offer the opportunity for adults with ASD to explore areas of special interest and engaging learning environments that are flexible, accommodating, and accessible. However, because people on the autism spectrum may communicate differently, process information in unique ways, and experience sensory or information overload in stimulating environments, museums can be challenging places for them. The Nat designed a program to address the challenges for people with ASD. The structure of the program helped young adults access museums and connect with others with ASD to help develop their social skills and confidence while also providing the museum with tools to assist visitors with ASD in the future.

EVALUATION PLAN

RK&A was contracted to evaluate whether and to what extent the project contributes to the achievement of the following intended goals of the programs as articulated in the evaluation plan for two audiences: (1) young adult participants; and (2) museum participants.

The evaluation explores the extent to which young adult participants:

- ◆ Feel and know they are contributing to society and their perspective is valued.
- ◆ Build social skills and communication skills with their peers and with museum professionals.
- ◆ Build confidence and self-esteem.

The evaluation also explores the extent to which museum participants:

- ◆ Gain awareness and knowledge of adults with ASD.
- ◆ Learn to successfully engage young adults with ASD.
- ◆ Increase sensitivity towards the needs of adults with ASD.

METHODOLOGY

RK&A used three methodologies to fully understand the context of the project and evaluate its effects on young adult participants and museum professionals.

OBSERVATIONS OF MEETUPS

To provide an objective account of the program experience, RK&A conducted three naturalistic observations of the meetups, evenly spaced over the course of the year-long program (March, June, October 2017). Given the sensory and information processing differences characteristic of autism, the observer was particularly sensitive to limiting distractions for participants, and took field notes discretely. Immediately after the program, the evaluator filled in missing details about behaviors, events, and conversations, and then typed them in narrative within days of the meetup. The same evaluator conducted each observation. During observations, museum staff invited the researcher to join group conversation during the introduction. With the understanding that participants were developing social skills, the researcher lightly conversed with participants about their interests during downtime when initiated by the participants.

Data are qualitative, meaning that results are descriptive. In analyzing the data, the evaluator studied the observation notes for meaningful patterns and grouped similar responses as patterns and trends emerged. The objectives of the study, as well as our professional experience, informed the analysis. The observation summaries are organized by meetup and the intended goals for program participants with emphasis on how The Nat staff supported participants to achieve the goals.

MIXED-FEEDBACK FROM YOUNG ADULT PARTICIPANTS

Round One: Conversations – First-hand feedback from young adults in the program was essential to evaluating its effects. However, RK&A was intentionally flexible in the means of collecting feedback from participants to accommodate personal preferences. Midway through the program, RK&A requested feedback from participants either through a group conversation, one-on-one conversation, or written feedback. Each feedback method would be guided by the same set of pre-prepared questions. RK&A ultimately facilitated one-on-one conversations with a few participants who agreed, and one provided written responses. These data are qualitative and reported in case-study format so as to portray a fuller portrait of individual participants. Thus, the evaluator read the responses from each participant as a set, and reported out a summary of their responses supported with exemplary quotations.

Round Two: Feedback Forms – Because of a modest response rate in our first feedback attempt, RK&A adjusted our approach and developed feedback worksheets to collect a second round of participant feedback before the program finished. We kept in mind principles of universal design in developing the worksheets, such as attention to font, spacing/white space, textboxes for writing, color-coding, and presenting information in multiple modes.³ We also provided participants with a few examples of our observations for two reasons: 1) to offer findings from our research to participants as a means of increasing their “buy-in” to the evaluation, and to lessen any anxiety about the kind of research we were conducting; and 2) to provide participants with a framework for thinking about three very abstract concepts in tangible ways, as individuals on the autism spectrum may struggle to interpret ambiguous goals. We supported our observations with pictorial icons to engage multi-modal communication.

³ "The Seven Principles of Universal Design." Teaching Tolerance. August 2017. Accessed February 27, 2018. https://www.tolerance.org/sites/default/files/general/seven_principles_of_universal_design.pdf.

During the last observation (October meetup), the evaluator introduced participants to the worksheets and 1) discussed the reasons for the different evaluation approaches (i.e. that feedback directly from participants supplements the observations, as the observation notes do not reveal what participants are *thinking*); and 2) reviewed consent and reminded participants that their responses are anonymous and their participation is voluntary. Participants were asked to write or draw responses. The evaluator read each page of the worksheets aloud as participants worked through the appropriate sections. One participant completed the worksheet with help from the occupational therapist. During administration, the museum's fire alarm rang and all evacuated. Participants completed forms after all returned to the room and settled down from the disruption.

The evaluator transcribed participants' handwritten responses to the worksheets and grouped them by question. The data are qualitative, meaning the results are descriptive. In analyzing the data, the evaluator studied the responses for meaningful patterns and grouped similar responses as patterns and trends emerged. Trends and themes in the data are presented from most- to least-frequently occurring; because the sample size is less than ten, most findings report the actual number of respondents who provided a particular response. For some questions, respondents mentioned more than one idea.

Because we prompted participants with our own observations, RK&A recognizes greater room for response bias than is typical for our studies. Thus, in reporting, we provide each prompt provided to participants throughout the findings as context for participants' responses. And, we differentiate between whether participants "agreed" with and/or elaborated on prompts we provided, or whether they "said" something different. Findings from this dataset are supported/triangulated by naturalistic observations and interviews with young adult participants and museum professionals.

INTERVIEW WITH MUSEUM PROFESSIONALS

The evaluator also conducted open-ended interviews with museum participants about the program using an interview guide and asking probing or clarifying questions to better understand participants' experiences. The evaluator typed notes during each interview, recording responses as close to verbatim as possible.

In analyzing the data, the evaluator studied the interview notes for meaningful patterns and grouped similar responses as patterns and trends emerged. The objectives of the study, as well as our professional experience, informed the analysis. Trends and themes in the data are presented from most- to least-frequently occurring. Because the sample size is 10 or fewer, most findings report the actual number of participants who provided a particular response.

HUMAN SUBJECTS PROTECTION

RK&A received approval from an independent institutional review board (IRB) for the study. In designing and conducting the study, RK&A was particularly sensitive to the distinct characteristics of people with ASD. For instance, when conducting observations, the evaluator was careful to take notes discretely and quietly, so as not to distract participants with extra visual or auditory input. Similarly, our flexibility in data collection honors participants' agency, and respects varying levels of comfort with having an extended conversation with a relative stranger over the phone or in person. To that end, we offered the opportunity to submit answers to interview questions in writing, and shared the instrument with participants before their interviews so they could prepare if they chose. Our approach intentionally prioritized respect for the participants' different sensory experiences, need for consistency and order, and differences in

communication abilities and preferences over the neutrality and standardization more typical of our work.

NOTE ON LANGUAGE CHOICES IN REPORTING

We recognize language preferences vary among individuals with ASD and their communities. The Nat and most museum and young adult participants typically used person-first language (“person with ASD”). Many self-advocates prefer different language, such as describing themselves as an “autistic person” instead. In reporting, we use person-first unless otherwise stated by a young adult participant. Likewise, we recognize the limitation of communicating ability in terms of “functioning” descriptors; except for when described by the museum and participants explicitly, we discuss “functioning” in terms of specific ability to promote clarity (e.g. “they communicate verbally”).

MEETUP OBSERVATIONS

RK&A observed three of sixteen SPECTRUM meetups, evenly spaced across the program's duration. SPECTRUM participants and staff met every three weeks at The Nat. During the meetups, participants and staff visit a Balboa Park museum and make observations of the experience and/or work together with staff to organize their ideas into social stories for publication on the participating institution's website. Meetups last about four hours in the afternoon. The Nat staff and an occupational therapist facilitated the meetups.

Ten young adults originally attended the meetups. A few of these attended sporadically or stopped attending mid-way through the program. During observations, the observer was sensitive to limiting distractions for participants, and thus took notes discretely. In analyzing the data, the evaluator studied the observation notes for meaningful patterns and grouped similar responses as patterns and trends emerged. The observation summaries are organized by meetup and the intended goals for program participants with emphasis on how The Nat staff supported participants to achieve the goals.

The evaluation explores the extent to which young adult participants:

- ◆ Feel and know they are contributing to society and their perspective is valued.
- ◆ Build social skills and communication skills with their peers and with museum professionals.
- ◆ Build confidence and self-esteem.

SUMMARY OF PROGRAM CHARACTERISTICS PER MEETUP

Over the course of the program and at varying levels, the group’s dynamics, meetup logistics, and settings changed; and, the staff made some changes to their facilitation styles. These changes are presented below to introduce and provide context for the progression of the three meetups.

OBSERVATION 1 FOURTH MEETUP March 23 rd , 2017	OBSERVATION 2 EIGHTH MEETUP June 15 th , 2017	OBSERVATION 3 FOURTEENTH MEETUP Oct. 19 th , 2017
All participants attended	About <u>one-half</u> attended	About <u>one-half</u> attended
Most of the meetup took place at The Nat, and Spanish Art Village.	The meetup took place at The Nat, and in Balboa Park.	The meetup took place at The Nat and in Balboa Park.
Staff provided <u>some</u> fidgets, paper, and pencils/pens.	Staff provided many fidgets, engine changers (e.g., sour candy), exercise balls, paper, pens, etc.	Fidgets, etc., were available but staff didn’t draw attention to them; the room was hot.
Participants and staff collaborated to write an outline for their first social stories (Fleet Science Center [Fleet]/Museum of Photographic Arts [MOPA]).	Participants and staff reviewed the SDMA social story outline, then took pictures at SDMA.	Participants and staff chose pictures for the Japanese Friendship Garden (JFG) social story, walked to JFG, and started The Nat social story.
Staff offered assistance to participants (e.g., verbal support, behavior intervention).	Staff encouraged participants to advocate for themselves before providing assistance.	Some participants advocated for themselves; staff responses varied.
Participants were friendly and conversational, especially with staff support, but still getting to know each other.	Participants were more conversational, but still had some staff support.	Participants were very conversational with less staff support, but conversation waned as the meetup progressed.
Staff provided a lot of structure and guidance for participants while writing social stories.	Staff provided some structure for social story creation (e.g. SDMA photography worksheet).	Staff provided some structure for social story creation (e.g. worksheets, equipment setup).
Staff led the experience.	Participants had opportunities for leadership.	Staff encouraged participants to take the lead on social story work.

OBSERVATION #1: MARCH MEETUP

RK&A observed the first of the SPECTRUM meetups on March 23rd, 2017, which occurred at The Nat and the Spanish Art Village.

HELP PARTICIPANTS FEEL/KNOW THEY CONTRIBUTE TO SOCIETY/ARE VALUED

Staff demonstrated intent to support participants' ASD needs, particularly regarding sensory and information processing. Staff took many steps to lower the meeting room's sensory impact. The meeting room is a small, windowless conference room with navy-blue walls. Ordinarily, fluorescent ceiling lights illuminate the room, but staff kept the lighting dim with four soft LED lamps purchased for the project. At the center of the table, staff set a basket of fidgets or "engine changers." Staff gave each participant a nametag to support relationship development since learning faces and names can be especially challenging for some on the spectrum. Staff also did not require the young adults to participate in a specific way. For instance, one participant appeared to be sleeping during one discussion; after that meetup, staff reflected on whether they should have intervened, but they ultimately decided that, especially since the participants are adults, their choices are an important component of the program.

Program staff explained how participants' unique perspectives can impact museums.

During a storyboarding process, The Nat staff consistently highlighted that participants' unique perspective can impact museums. Before splitting into two groups to create social stories, program staff asked participants to recall what a social story is. They then synthesized participant responses and emphasized that a social story is a tool that other people with ASD, or "like you," could use to help them prepare for a museum visit. Throughout the 45-60-minute storyboarding workshop, staff reminded the participants that they are uniquely positioned to help others with ASD navigate these museums. For instance, when a participant identified that the lockers were not marked on the museum's map/brochure, program staff said the museum reprints the maps often so they would likely be open to the suggestion of making that change.

ROOM SETUP WITH FIDGETS, ENGINE CHANGERS, AND "HOW ARE YOU FEELING?" CHART



5	OVERWHELMED PANIC ATTACK CONFUSION LOSS OF VERBAL ABILITIES	FEELINGS CAN'T PROCESS "SHUT DOWN" THOUGHTS
4		
3	FRUSTRATED IRRITATED NERVOUS ANXIOUS	
2		
1	HAPPY CALM EXCITED	RELAXED CONTENT

HELP PARTICIPANTS BUILD SOCIAL & COMMUNICATION SKILLS

Staff used inquiry to encourage conversation. Staff frequently asked questions to scaffold the experience. For instance, one staff said: “Walk us through the visit, and refer to the notes to give examples... I see some categories emerging. What do you see?” In addition to open-ended questions, staff sometimes used clarifying questions to help participants articulate their ideas, or deeper inquiring questions after paraphrasing ideas not fully articulated.

Program staff allowed side conversations among participants so as not to stifle communication. In most cases, staff did not interrupt tangential conversations among participants, but rather encouraged them. For example, when participants shared their dream jobs for an icebreaker⁴, other participants and staff responded to these stated dream jobs with movie references, general support for pursuit (“Cool!”; and “You would be good at that because you’re already good at x,”), and sometimes follow-up questions.

Staff praised appropriate interactions with others. Staff did not force participants to sit still nor demonstrate traditional signs of attention (eye contact, looking at the board, taking notes), but rather praised them for clear communication. For example, one participant who wandered away from the group toward nearby collections told staff that they were still listening, and staff thanked them for “letting us know you’re still participating.”

Staff considered group dynamics. Staff were exceptionally thoughtful in arranging young adults into two groups based on the social dynamic among participants. Staff were similarly attentive in managing individuals’ comfort and behaviors during the meetup. Several times, the occupational therapist gave participants fidgets to help them manage self-stimulatory behaviors during group conversations. Additionally, in response to widespread fatigue after snack, staff adjusted the schedule to explore an exhibition in progress, showing the participants parts of the collection, models of the exhibition gallery, and going to the empty gallery itself.

HELP PARTICIPANTS BUILD CONFIDENCE & SELF-ESTEEM

Staff validated participants’ thoughts and experiences. The storyboarding process stimulated a number of conversations related to coping with sensory issues, such as things they might bring with them to a museum to cope with sensory issues. In these conversations, staff validated participants’ thoughtfulness in planning for their “comfort needs” and lauded both the conversation *and* the planning as expressions of self-advocacy. In other instances, the occupational therapist validated emergent conversations about ASD challenges, especially when personal in nature (“You’re not alone; I bet the website is challenging for a lot of people.”)

Staff drew participants’ attention to their peers’ experiences. Staff frequently reminded participants that their experiences are shared by others, offering an opportunity to extend their identity beyond themselves to members of a peer group. For instance, upon recognizing the echoes made in an empty gallery, participants whistled, hummed, snapped fingers, and tapped feet, so staff said they looked like they were having a “dance party.” This comment drew participants’ attention from themselves to others’ movements and sounds. Other behaviors supported staff’s aim to move participants “from me to we.” For example, when one participant expressed doubt at how their personal experiences at the museums can be useful to others with ASD, including children, staff responded, “Well, it’s not just kids, it’s adults like you too, and you can help them with navigating barriers you’ve identified as challenging for yourself.”

⁴ The icebreaker question was “If you could have any job in the world, even if you don’t have the skills for it right now, what would you be?”

OBSERVATION #2: JUNE MEETUP

RK&A observed the eighth of the SPECTRUM meetups on June 15, 2017, which occurred at The Nat, the San Diego Museum of Art (SDMA), and Balboa Park.

HELP PARTICIPANTS FEEL/KNOW THEY CONTRIBUTE TO SOCIETY/ARE VALUED

Program staff were welcoming and genuine in their interactions with participants. When participants spoke, staff listened attentively and responded with interest. For example, one participant, who volunteers at the San Diego Zoo, described animals likely to be featured in a new exhibit, and listed facts about the Ethiopian Wolves they hoped would be included. Staff followed up with lots of specific questions about the wolves.

Staff supported participants in challenging moments. As challenges arose for participants (sensory overload, anxiety, etc.), staff responded and assisted participants without judgment. For example, during the entry experience at SDMA, one staff and one participant left the noisy atrium to find a quiet space. Later, another participant became overwhelmed at the museum, staying behind the group and sitting on the floor. Staff responded by asking them to describe the feelings/sensations they were experiencing and guided them through a breathing exercise. The participant ultimately decided to go home early.

Staff provided support and structure to facilitate project work. In addition to their continued management of the meeting room's sensory impact, since the last observation, staff purchased two exercise balls, additional fidgets, and engine changers. These tools were available for participants to use freely during the meetup at The Nat. When participants arrived at The Nat, they rushed the fidget basket, almost everyone taking a fidget or candy.

Staff provided emotional support. In a debrief conversation, staff discussed how some participants may not necessarily receive emotional support at home and expressed their desire to provide support while at the meetup. One staff said a participant has called outside of work time to share the challenges they face at home. Staff discussed their intention to create a safe, supportive environment for participants.

HELP PARTICIPANTS BUILD SOCIAL & COMMUNICATION SKILLS

Staff provided a safe environment for participants to initiate and explore connections with each other. During the introductions and icebreaker, conversation among participants flowed when discussing common interests. For example, one participant shared excitement about an upcoming *Magic: The Gathering* tournament in Las Vegas. Other participants asked excited questions, including who was going with them and details about activities they will do. One gave recommendations, such as to visit the arcade, but noting that if you do, you'll need quarters because that's all the games take. This segment of the meetup served as a forum for participants to recognize and explore connections with each other and to practice social skills. Staff later noted that participants only sometimes volley conversation by asking questions or showing interest in the other person; other times, they respond by relating new information back to *themselves*, especially in less structured conversations. Staff also said it is now a regular occurrence for some participants to hang out before, after, or outside the meetups.

Staff modeled communication. At SDMA, staff modeled more complicated communication such as asking the security guard how to use the coat check. The guard said something to the effect of, "you leave your coat in here," but the staff responded that the door is closed and locked. Staff continued to ask clarifying questions until they understood the coat check process.

In doing so, staff demonstrated how elements of a museum visit may be confusing for *all* visitors, and how participants might ask questions to seek clarity.

Staff were responsive to participants when their social or communication skills fell short.

Staff holistically considered individual participants' needs and behaviors. For instance, one participant showed their frustration a few times during the meetup. In one instance, their frustration was related to not knowing whether the group would be able to visit the sculpture garden that day; in another, to clashes with peers who were "annoying" her. Because of this participant lashed out verbally, so staff discussed holding potentially hurtful or inappropriate comments in "thought bubbles" above their head instead of speaking them. Similarly, staff guided another participant by reframing a question. The participant had taken a picture inside a restroom to show the restroom location. Staff asked them, *what if I wanted to find the bathroom? How could you use a picture to show how to get to the bathroom?* The participant stepped slightly away from the door, but still too close for a wayfinding photo, so staff guided them farther backward.

Staff were cognizant of group dynamics. In their debrief conversation, staff discussed the advantages and disadvantages of participants working in one large group versus a few small groups. While staff said smaller groups allow for more participation and easier communication between participants, being in a large group of peers is a strength of the project. Participants also identified with the group, or as one participant described everyone, "our family." Staff identified one participant as especially perceptive of the group's dynamics, often checking in with other participants and stopping to wait for distracted group members to catch up because "we're a team." Staff also take the pulse of the room; for example, toward the end of the meetup, staff recognized participants' energy waning and adjusted the schedule to lift the energy level.

HELP PARTICIPANTS BUILD CONFIDENCE & SELF-ESTEEM

Staff scaffolded self-regulating behavior and encouraged self-advocacy. To begin meetups, the group used the check-in chart to guide them through a conversation about how everyone is feeling. During check-in, staff reminded one participant who indicated high anxiety to "advocate for yourself as needed," a shift from the staff's typical response, "Let us know what we can do to help." In debrief, staff said that they wanted participants to initiate self-advocacy and communication, identifying it as an appropriate challenge at this phase of the program.

Staff provided leadership opportunities. Whereas staff facilitated most of the project work during the March meetup, during the June meetup, staff both called on participants to lead and encouraged leaders to emerge organically. When reviewing their work from the previous SDMA visit, staff called on a more reserved participant to read the "arriving at the museum" and "moving around the museum" notes; the participant read verbatim, though occasionally interjected their own perspective.⁵ Leaders emerged later in the meetup, such as when one participant told another to stand at the bottom of the ramp with their service animal and the former took a picture of the latter to visualize an element in the social story.

Staff were consistent in their overall approach, allowing participants to develop a sense of what to expect, how to behave, and how to approach project work. By this visit, the group had already visited a few Balboa Park museums. When they entered SDMA, photo "checklist" in hand, participants initiated work on their own and as a team, with staff prompting action only a few times. Participants generally moved through the museum with confidence, enjoying the art and, in most cases, dutifully working on the project. They seemed to know what to expect and do, though only one-half had been to the previous meetup or previously visited the museum.

⁵ They read, "ask staff at desk where photography is/is not allowed" and added "flash photography is never allowed."

OBSERVATION #3: OCTOBER MEETUP

RK&A observed the fourteenth of the SPECTRUM meetups on October 19, 2017, which occurred at The Nat.

HELP PARTICIPANTS FEEL/KNOW THEY CONTRIBUTE TO SOCIETY/ARE VALUED

Staff specifically asked participants to speak as experts on ASD. In preparation for the Association of Science and Technology Centers conference, staff asked participants what they would like museum professionals to know about SPECTRUM and engaging young adults on the autism spectrum in general. In this conversation, participants said creating social stories has personal value to them and, by extension, others on the autism spectrum. Other participants agreed that SPECTRUM illuminates the “positive” aspects of participants’ differences, “because we can show people how others perceive this museum. We can do things for society.” Furthermore, participants demonstrated their investment in social stories’ success through the thoughtful discussion and consideration of how the social story will actually be used – that is, they take the perspective of the potential museum visitor. For example, one participant noticed a misleading sign on the bathroom door at The Nat; they expressed concern that other visitors would misinterpret the sign, especially others with ASD, who may interpret it literally. Participants shared a range of ideas about autism and accessibility (more suited to discussion of the other two goals). In general, participants agreed that the SPECTRUM project’s existence validates their perspectives and presents an opportunity to contribute to society.

Staff provided emotional support for participants. When participants verbalized anxiety or appeared distressed, staff responded by offering reassurance. For example, when the museum’s fire alarm rang unexpectedly, participants evacuated outside. This event was distressing for a few participants because of the alarm’s volume and confusion about whether they would be affected by an emergency. Staff supported them by asking participants to observe other people outside the museum, and suggested if the others were not panicked or afraid, participants could thus infer that they are safe. Staff repeated “You are safe,” a few more times.

PARTICIPANTS EMPOWERED AS A RESULT OF BEING ENCOURAGED TO SPEAK AS ASD EXPERTS



One participant expressed concern that other visitors would misinterpret the sign on The Nat restroom, especially others on the autism spectrum, who may be more literal in their interpretation.

HELP PARTICIPANTS BUILD SOCIAL & COMMUNICATION SKILLS

Staff provided a forum for participants to exchange ideas and develop the social stories on their own. As participants became more comfortable with the program, staff increasingly stepped back to allow them to facilitate discussions on their own. And, when participants expressed their ideas, their peers often validated those thoughts or shared thoughtful feedback. In discussion about photos for the Japanese Friendship Garden (JFG), participants volleyed conversation and recognized each other's insights.⁶ By contrast, in previous meetups, conversations about social stories were mainly facilitated by staff.

Staff created a forum for participants to discuss their experiences as young adults on the autism spectrum. In addition to discussing social stories, participants discussed autism and how museums—and society at large—should approach working with individuals on the spectrum. Participants built off each other's comments in this discussion. One said museum professionals should know, “Just because we're on the spectrum doesn't mean we don't understand you.” Another added, “we're adults.” They discussed how people sometimes change the way they talk to them after finding out about their diagnoses. One called this “special ed voice,” and all agreed that this is a common experience. Participants connected over these shared experiences. In response to one sharing their thoughts, another responded, “That was poignant... thanks for sharing that with us.” In these examples, participants validate each other's contributions.

Staff created a space for participants to connect with each other. SPECTRUM participants became perceptive of their peers' needs over time. For example, when staff called on a participant, and they did not respond to the question, staff asked again. A participant seated near them responded, “He is thinking.” The second participant drew the group's attention to the other's need for more time to process the information and put into words. With extra time, prompting and hints from other participants, the first participant successfully answered the question. Likewise, when the fire alarm rang, participants with sensory processing disorder needed to block their ears while evacuating; participants who were less bothered by noise held the doors so their peers could continue plugging their ears during evacuation.

Staff occasionally prompted participants to engage with others in ways that don't depend on verbal communication. For example, during the icebreaker conversation, a participant who is typically quiet or shy agreed to beatbox for the group with prompting from staff. Using their binder and a “beat” from a peer, the participant performed for a minute, while others bopped their heads or tapped along with their fingers before applauding at the end.

HELP PARTICIPANTS BUILD CONFIDENCE & SELF-ESTEEM

Staff provided structure for participants most of the time. Providing a support structure to facilitate project work and communication is, as staff discovered and shared in the project's blog, imperative to working with people on the spectrum. To meet this need, staff provided a (relatively) sensory-safe room as a regular meeting place; shared an agenda for each meetup that followed a similar sequence of events; provided tools, such as “paying attention” worksheets; made quiet rooms and fidgets available; and, guided project-related discussion. However, there were two major schedule changes during the October meetup. According to the agenda, the meetup involved two tasks: review photos for the JFG, and begin the social story for The Nat. After

⁶ *Participant A: I know a lot of people like to meditate [at the garden]. Is there a timeframe it's quieter, did you ask when you were there? **Participant B: No, but maybe we should write that you should call them to ask before you go because there are a lot of events. There's no specific area for meditating. ***Participant C: Maybe dusk or dawn are the best because that is when people go fishing because it is calm... **Participant B: Thank you for answering. *Participant A: Sorry, I wasn't here when you were making the list. Participant B: No, it's a valid point.

participants finished reviewing the photos, staff announced that they would all go to the JFG to reshoot some photos instead of starting The Nat social story. This schedule change prompted anxiety from at least two participants. Upon arrival at the JFG, staff learned it was closed; thus, the schedule changed back to starting The Nat social story. This second change prompted more resistance: one participant said they were not sure being in the museum's atrium was a "good idea" because "it gets really crowded for me right now." Staff responded that, since the task was detailed on the original agenda, "it is not much of a change." Another said they felt "done" because "it's hot up here, it's loud down there, I hate everything," and that they are tired. Late in the afternoon, participants were quiet, after having been more conversational than previously observed; they stretched out in their chairs, and some used their phones.

Staff customized their approach to participants' processing abilities most of the time.

However, one participant, who typically shared their thoughts only when prompted may have needed greater support. The participant repeatedly verbalized that they were not following along, and asked for others to repeat information so they could make notes of their own a few times, indicating participation. In other instances, they asked for others' notes to follow along again, or what the group was talking about generally; staff noted, in both instances, that there were not notes to share, and reminded them of what the conversation was about. In the second instance, they resumed writing/drawing, and scrunched their face. It seems this participant wants to join in, or at least follow, group work more seriously, but requires different support to do so.

Staff provided more opportunities for leadership. With each meetup, staff seem to "step back" from social story creation, granting more agency to participants. The most poignant example during this meetup is the participants' discussion about photos from the JFG. After passing out a notetaking sheet and setting up the projector and laptop, staff asked who would like to take notes. Staff began reading the worksheet aloud, but paused mid-sentence to say, "Actually, [participant name], why don't *you* read this out loud for us." In addition to reading the worksheet, the participant led the whole discussion—asking when others were ready to move on, about their final choices for photos, etc. The majority of discussion took place among participants, with staff occasionally moderating.

PARTICIPANTS EMPOWERED BY CONNECTING WITH THE GROUP



Participants valued the group dynamic. One said, "I love this program for this [talking]," as they gestured their hand in a circle around the table. Another said that discussions with "others my age with the same challenges" was important because it "helps with how we think about ourselves." When staff asked participants whether the program has developed into a "safe space" over time, one participant responded that it "feels like a family," and others agreed

PARTICIPANT FEEDBACK – ROUND ONE

Between June and July 2017, RK&A collected feedback from four participants about their experiences with SPECTRUM up to that point. Midway through the program, RK&A requested feedback from participants either through a group conversation, one-on-one conversation, or written feedback. Each feedback method would be guided by the same set of pre-prepared questions. RK&A ultimately facilitated one-on-one conversations with a few participants who agreed, and one provided written responses.

These data are qualitative and reported in case-study format so as to portray a fuller portrait of individual participants. Thus, the evaluator read the responses from each participant as a set, and reported out a summary of their responses supported with exemplary quotations.

Participant One

Phone conversation

“I always enjoyed going to the museums as a kid, especially to the Fleet [Science Center] and the Museum of Man, and my parents were okay to talk to about [museums], but they weren’t that engaging.

Here, I have like-minded individuals and we can have really good conversations about what we’ve seen.”

MOTIVATION TO PARTICIPATE IN SPECTRUM

Participant One initially “jumped at the opportunity” to participate in SPECTRUM because of their interest in history, museums, and an understanding they “might get employment in one way or another” through the experience. At first, they were hesitant because they “get a little shy,” but Participant One says they “do better nowadays” with socializing.

ENJOYABLE ASPECTS OF PROGRAM

Participant One enjoys going to the museums that they have visited “since childhood” with a free Explorer Pass, and “getting to meet some interesting individuals.”

CHALLENGING ASPECTS OF PROGRAM

Participant One said the “lower-functioning” participants, especially in relation to stimming behaviors, can “get on my nerves,” with the caveat that, “it’s not a bad thing, just hard to be with people like that.” Participant One works through this challenge by “mostly ignoring it.” Participant One said there is “not much” that staff could do to help with this issue, as it is more of “nuisance” than a “challenge.”

KNOWLEDGE OF SOCIAL STORIES PRIOR TO PARTICIPATION

Participant One knew “just some things my mom and a friend told us,” and looked up the definition of “social stories” about one month in advance of the program.

ENJOYABLE ASPECTS OF CREATING SOCIAL STORIES

Participant One said the most enjoyable aspect of creating social stories is “getting to go to the museums and having people to talk with about it.” They said these conversations are with “like-minded individuals” about shared interests.

CHALLENGING ASPECTS OF CREATING SOCIAL STORIES

Participant One said making social stories has not been “all that difficult,” and the program is “mostly [about] us getting to know each other and our museums and what people like us need to feel more comfortable at them.”

Participant Two

Skype conversation

“I know how difficult it can be to go out and leave the house with... to figure out, here’s a space I can go to calm down and see a museum still.”

MOTIVATION TO PARTICIPATE IN SPECTRUM

Participant Two was motivated “to help other people on the spectrum go to museums” because they perceive museums as “designed” to support the deep special interests of individuals with ASD, but the visit experience can be a “difficult process.” They also wanted to socialize with others on the spectrum, noting they “did not have any friends before this project.”

ENJOYABLE ASPECTS OF PROGRAM

Participant Two enjoys visiting the museums and engaging with other people on the spectrum. They said it’s “much easier” to do project work because their peers “don’t think you’re weird.” And, since they “know how difficult it can be to go out and leave the house,” they see the value in a social story that provides useful information about a museum, such as where quiet and crowded areas are located.

CHALLENGING ASPECTS OF PROGRAM

Participant Two has “really bad sensory problems,” so participating is challenging when it involves loud noises or fluorescent lights. They work through sensory challenges by moving to a quiet space, using headphones, or utilizing their service animal. They also experienced a neurological problem that prevented them from writing, so staff act as a “scribe” for them. Participant Two said staff also support them by asking if they are okay, if the environment is too loud, or suggesting they move somewhere quieter. They said staff are “very attuned to the needs of different individuals,” such as when staff subtly keep tabs on participants who like to wander away from the group.

KNOWLEDGE OF SOCIAL STORIES PRIOR TO PARTICIPATION

Participant Two uses personalized “step-by-step” social stories for travelling, especially on airplanes, made by a family member.

ENJOYABLE ASPECTS OF CREATING SOCIAL STORIES

Participant Two said the best part of making social stories is “being able to use them,” and creating “a document that will help make Balboa Park more accessible, which is goal of the park.” And, they enjoy working with peers “on a project that will help so many people.” And, despite challenges, the museum has “made it fun and enjoyable.”

CHALLENGING ASPECTS OF CREATING SOCIAL STORIES

Participant Two said “communicating what I’m thinking” is the hardest part of creating social stories. That is, they “tend to write a lot of notes” and are “very detail-oriented.” Thus, it is hard for them “to communicate to people what I’m thinking and what I noticed,” because others can “get a little confused” if they didn’t notice the same details.

OTHER FEEDBACK ABOUT SPECTRUM

Participant Two suggested the museum “assure us that we’ll have enough time to finish all the social stories we promised we’d do.”⁷ They also asked about if and when participants would have access to this research.

⁷ At the time of the interview, the group had completed two of seven social stories; while all social stories were written and photographed by the end of the program, The Nat’s designers are still working on the final products to be shared by the Balboa Park museums.

Participant Three

Phone interview

“I’m a kind and caring person myself and respect others who are kind and caring. That’s very important when you meet new people. If they respect and care about you the relationship will be better for everyone because you have that base of respect right there.”

MOTIVATION TO PARTICIPATE IN SPECTRUM

Participant Three heard about the program from their mom, who thought it was “a cool project.” Participant Three then “sent in an application to see where it took me.”

ENJOYABLE ASPECTS OF PROGRAM

Participant Three said socializing with others on the spectrum who “are similar to me,” and the staff’s kindness, are the best parts of the program. Participant Three said they “respect others who are kind and caring.”

CHALLENGING ASPECTS OF PROGRAM

Participant Three said “dealing with other people on the spectrum and their differences compared to mine,” such as punctuality and scheduling differences, is challenging. They said it is “difficult” to adjust to the differences between those who are “more severe or higher on the spectrum,” when working as a group. They work through this challenge by trying to “remember that these are people who should be respected and they have challenges I don’t understand myself.” They try to be “an accepting person” who is tolerant, rather than “rejecting” others.

PERCEPTION OF STAFF RESPONSE TO CHALLENGES

Participant Three suggested staff “provide moral support” and talk about the challenges with them. “But,” they say, “it comes down to me being able to deal with it.” Participant Three applies a lesson from camp (“I am the creator of my own problems”) and said they understand that they must take responsibility for managing these challenges because they chose to apply to the program.

KNOWLEDGE OF SOCIAL STORIES PRIOR TO PARTICIPATION

Participant Three knew “absolutely nothing” about social stories before SPECTRUM.

ENJOYABLE ASPECTS OF CREATING SOCIAL STORIES

Participant Three said “seeing the finished product” is the most rewarding part of creating social stories.

CHALLENGING ASPECTS OF CREATING SOCIAL STORIES

Participant Three said having a “functional freeze” one day while working on social stories caused them to “sit out” from activities for an afternoon. They also said they “feel like I’ve learned more about myself through that experience,” but did not expound.

OTHER FEEDBACK ABOUT SPECTRUM

Participant Three recommends “keeping it simple” while making social stories.

Participant Four

Written response

“Understanding why some things are abnormally difficult for one's self or why one might excel in other areas is an invaluable thing that, in my case, has done much to mitigate the frustration and anxiety I've experienced as a part of having ASD...Seeing the amount of resources and aid available in 2017, I want to be able to contribute my own knowledge to that pool in the hope that I can help at least one other person dealing with similar ASD-related conflicts.”

BACKGROUND

Participant Four provided a lengthy written response to the interview guide. They rarely vocalized feedback and noted that they felt uncomfortable providing feedback to staff throughout the project; thus, we present this feedback with greater detail to convey the participants' robust thoughts and deep interest in the autism spectrum and services.

MOTIVATION TO PARTICIPATE IN SPECTRUM

Participant Four is interested in autism generally, and particularly in “knowing how I am similar, and how I'm not” to others with ASD as a means to better understand themselves and autism. They were also drawn to SPECTRUM because they “take pride in my ability to write and communicate accurately.”

ENJOYABLE ASPECTS OF PROGRAM

Participant Four enjoys applying their deep knowledge about and experience with autism to project work because it has helped them “better conceptualize these issues as something more than just loosely-collected information and experience.” They emphasize the value in assigning language to neurological phenomena, which “provides necessary catharsis,” and the opportunity for self-understanding.

CHALLENGING ASPECTS OF PROGRAM

Participant Four shared a few challenges. First, they hoped the project would “examine” more seriously the “nuances and subtleties” of the ASD experience in relation to museums. While they also questioned whether participant should have some college education as a prerequisite (as a means to “greater” pace and scope in project work), they have noticed themselves and other participants “improving as a group, becoming more thoughtful and observant in our examinations,” and copes with differences in abilities among the group by being “optimistic and professional.”

PERCEPTION OF STAFF RESPONSE TO CHALLENGES

Participant Four said they have not addressed these issues with staff. Rather than “complaining” during meetings, Participant Four instead focuses on “encourage[ing] more sophisticated discussion.” They also note, “the project is not at fault for not being run the way I personally envisioned it.”

KNOWLEDGE OF SOCIAL STORIES PRIOR TO PARTICIPATION

Participant Four said they knew “nothing” about social stories before the project. They described browsing Carol Gray's website and suggested “her ideas on what constitutes a social story are...too rigid,” but they recognize the value of social stories overall. They said the project prompts them to think about “further applications for social stories.”

Participant Four **(Continued)**

“My underlying fear has been the uncertainty that I'm merely translating my own anecdotal experience and assuming that the majority of autistic people will agree with me. I try to reflect my ideas off the rest of the group to ensure I'm not full of hot air when I make a claim about what autistic museum guests may or may not like, although I do feel strongly about much of what I contribute.”

ENJOYABLE ASPECTS OF CREATING SOCIAL STORIES

Participant Four has enjoyed putting their problem-solving skills to use by creating a tool that is “useful” to others in need. Creating social stories “is rewarding in and of itself.” They find this work important because they feel that “many of the issues we address in our meetings are rarely considered by any professional body in any capacity.” Furthermore, Participant Four said the process of creating social stories has helped them “cultivate a better understanding of ASD in relation to my own experiences and others’.”

CHALLENGING ASPECTS OF CREATING SOCIAL STORIES

Participant Four said it is challenging to “make claim[s] about what autistic museum guests may or may not like,” and is afraid to make assumptions about the way others experience a museum or ASD in general. They shared an example from a discussion about the San Diego Museum of Art:

For example, I made a big fuss over the directions (or lack thereof) at the San Diego Museum of Art. I believed an autistic visitor could potentially be confused, as some of the exhibits do not feature any boundaries or perimeters whatsoever while “hands-off” rules are strictly enforced. Several sculptures in particular would not look out of place at a playground. A young autistic child might impulsively touch, grab, climb, or run through the sculpture and be reprimanded by an attendant. Queue the sequence of punishment, self-hate, and the lowering of self-confidence for the child, as well as the tainting of the museum experience.

Participant Four said they “want the social stories to prevent all of this” while acting as an educational resource on museum etiquette. Additionally, they would like to explore the question of “representing autistic people as a whole” in light of the argument that “no two autistic people are alike.”

OTHER FEEDBACK ABOUT SPECTRUM

They again expressed discomfort about “taking any complaints to the museum staff.”

PARTICIPANT FEEDBACK – ROUND TWO

RK&A collected a second round of participant feedback via accessibly designed worksheets. In designing these feedback forms, RK&A considered elements such as white space and visual prompts to enhance readability and communication. RK&A offered examples from observations of the first two meetups to give participants a concrete framework to consider these abstract, open-ended questions. Six participants completed feedback worksheets in total. One participant completed the worksheet with help from the occupational therapist. Administration of the worksheets was interrupted by the museum's fire alarm, and resumed when participants settled down after the disruption.

Responses are presented in narrative and organized by outcome. We present the findings within the context of the worksheets as they were shown to participants to contextualize their responses with prompts we provided. We differentiate between whether participants “agreed” with and/or elaborated on prompts we provided, or whether they “said” something different.

FEEL AND KNOW THEY ARE CONTRIBUTING TO SOCIETY AND THEIR PERSPECTIVE IS VALUED

PERCEPTION OF STAFF SUPPORT

We provided participants with two observations of museum staff support to prompt their thinking on how staff have helped them and could better support them to achieve this outcome:

OUR OBSERVATIONS OF MUSEUM STAFF

Museum staff help participants feel and know they are contributing to society and their perspective is valued by:

- ◆ Providing space and structure for participants to work on social stories
- ◆ Telling participants the museums in Balboa Park can use their feedback, such as adding lockers to the Fleet map

Participants said staff helps them feel valued by:

- ◆ **Eliciting feedback to create social stories:** Four agreed they feel valued because the museums (of Balboa Park) are “trying to get their observations” from “a unique perspective that allows only us to create this feedback.” One of these said they know when “my contributions were listened to and taken seriously.” Another agreed they feel valued when The Nat staff “ask about my opinion...and what could be done in the future” about an exhibition relating to the participant’s special interest.
- ◆ **Providing support:** One said staff show participants are valued by responding to their needs, such as “finding some quiet spaces” for them to work through sensory overload.

Participants said museum staff can better support them to contribute to society and feel their perspective is valued with the following suggestions:

- ◆ **Allow for more agency:** Four participants shared ideas related to autonomy and ownership.
 - One said they “sometimes got the idea the finished project has already mostly been envisioned,” and, to an extent, felt they were “only here to... ‘represent autism’ for the project.”
 - One suggested participants could “come up with activities to break up the pace of constant work” on days they are working through their museum notes/pictures or writing social stories.
 - One shared they would “let [staff] know I know my way around,” but did not expound.
 - One noted it “would be nice but it’s not necessary” to be paid for their work on the project.
- ◆ **Greater transparency from museum professionals:** One said museum staff show participants are contributing to society and their perspective is valued by explaining “how the museums appreciate it” and who will use the information from their social stories. However, the participant suggested knowing “what the other museums specifically said” would increase this sentiment’s impact.

PERCEPTION OF PARTICIPANT ACHIEVEMENT

We provided participants with one observation of the group to prompt their thinking on how they and their peers demonstrate achievement of this outcome:

OUR OBSERVATIONS OF YOUNG ADULT PARTICIPANTS

Participants look like they know they are contributing to society and their perspectives are valued by:

- ◆ Making note of things to ask at the museum to prevent spreading any misinformation in their social stories

Participants said they and their peers feel they are contributing to society and their perspectives are valued when they are:

- ◆ **Helping others:** Two said they feel like they are making a contribution “when I see the effect of people’s lives we have changed” generally, and social stories will “help others be able to enjoy a museum, even if they are different.” Another said helping other participants is a “caring” way to contribute.
- ◆ **Creating social stories:** One agreed they see evidence of these goals in themselves and peers when they work together to create “accurate” social stories.
- ◆ **Too soon to tell:** One said it is “difficult to feel the worthwhile effects of our contributions this early on,” but is interested to discover “how social stories develop as a tool beyond our project.”
- ◆ **Giving feedback to museum staff:** One feels they “have a say in the museum” when staff ask their opinion on past or upcoming exhibitions.

BUILD SOCIAL AND COMMUNICATION SKILLS WITH PEERS AND MUSEUM PROFESSIONALS

PERCEPTION OF STAFF SUPPORT

We provided participants with two observations of museum staff to prompt their thinking on how staff have helped them and could better support them to achieve this outcome:

OUR OBSERVATIONS OF MUSEUM STAFF

Museum staff help participants build social and communication skills by:

- ◆ Creating chances for participants to chat with each other about their lives and interests, such as during the Icebreaker
- ◆ Modeling interactions with museum staff, such as asking SDMA security how to use the coat-check

Participants said staff helps them build social and communication skills by:

- ◆ **Creating opportunities for participants to connect:** Four agreed that staff give participants opportunities to “talk and interact with peers” and “giving us a chance to have our voices be heard” helps them achieve this outcome. Another said that “any interaction” outside of work or school helps to build social and communication skills.
- ◆ **Supporting participants in expressing themselves:** Three said staff supported them to “express how I was feeling.” One of these said the staff’s support extended beyond expressing their feelings during a group project in which they felt “ignored,” as the staff “even helped me solve the problem.” Another of these said, “Although social skills are different for me, I was able to express myself with support.” Another said collaborating or talking with others helps them to “express myself.”
- ◆ **Providing access to Balboa Park museums:** One said providing the Explorer Passes, and extending to showing participants *how to use* the passes, has increased their social and communication skills.

Participants said museum staff could do the following to help them build social and communication skills:

- ◆ **Increase sensitivity to unique needs:** Three shared ideas related to their (or peers’) specific challenges regarding socializing and communicating.
 - One noted that “sometimes people need more time...to communicate or be heard,” suggesting staff “add more time” for participants to process information and respond.
 - One said staff should practice “being more aware of participants’ emotional states,” particularly relating to participants’ comfort levels in interacting with certain peers.
 - One suggested staff “more actively” encourage them to a) contact fellow participants on their own, and b) use their Explorer Passes more frequently.
- ◆ **Be “less casual”:** One said interacting in any casual environment contributes to building social and communication skills; however, the participant said staff could “be less casual” to further help build these skills. [Participant did not expound.]
- ◆ **Nothing:** Two did not share suggestions for improvement.

PERCEPTION OF PARTICIPANT ACHIEVEMENT

We provided participants with one observation of the group to prompt their thinking on how they and their peers demonstrate achievement of this outcome:

OUR OBSERVATIONS OF YOUNG ADULT PARTICIPANTS

Participants show their social and communication skills by:

- ◆ Ask questions about each other's interests and experiences, such as
 - asking what someone will do on vacation
 - pointing out objects you like at the museum gift shop

Participants said they and their peers show their social and communication skills when:

- ◆ **Participants are accepting and kind:** Four said they and their peers are “understanding” and “friendly,” with each other, “more so than would be required for interacting with neurotypical people.” For one, this looks like “being attentive of each other’s particular needs or ‘quirks’ relating to autism.” Another of these said they showed these skills by being “able to tolerate others more” over the course of the program. One of these said showing attention to each other’s needs, such as “asking each other if they need help, especially when navigating high-sensory areas” is some way participants demonstrate social skills. Another of these said “just being together...knowing that there are other people like us” is most helpful in building these skills, as “often people on the spectrum feel isolated from the world and everyone else.”
- ◆ **Participants share their interests with the group:** Two said sharing about an interest or experience together demonstrates social and communication skills. For example, one of these said sharing “personal experiences,” such as visiting family or going on a trip contribute to this skill; the other said “showing [each other] great picture frames and art galleries inside the museum” employs their social skills. Another one noted that small talk and “chatting” before the meetups or during breaks is evidence of these skills.

BUILD CONFIDENCE AND SELF-ESTEEM

PERCEPTION OF STAFF SUPPORT

We provided participants with two observations of museum staff to prompt their thinking on how staff have helped them and could better support them to achieve this outcome:

OUR OBSERVATIONS OF MUSEUM STAFF

Museum staff help participants build confidence and self-esteem by:

- ◆ Listening to participants' ideas and asking questions about their interests
- ◆ Encouraging participants to advocate for themselves

Participants said staff help them build confidence and self-esteem by:

- ◆ **Staff take genuine interest in participants' passions and ideas:** Five participants said museum staff "show a loving interest" when participants share about their own interests, and that staff "listen to our contributions seriously." In this context, participants describe staff as "attentive" and "genuine." One of these appreciated that staff are both "not condescending," and also "don't infantilize our thoughts/actions due to disability."
- ◆ **Staff are kind:** Three participants said the staff show they care about participants by being "calm and kind," and "talking to us without judgement." One of these said the staff's kindness makes them feel like "best friends to us."
- ◆ **Staff are attentive to participants:** One said the staff helps them to "determine my anxiety," but did not elaborate.
- ◆ **Being in a group:** One said "staying together as a group" builds self-esteem.

Participants were asked how else museum staff could help them to build confidence and self-esteem, and offered the following suggestions:

- ◆ **Miscellaneous:** Participants shared a range of ideas for improvement.
 - Providing printed notes to help them "follow along."
 - "Learning more about people on the spectrum so you can help them."
 - Helping participants to "develop ideas into more advanced solutions for the problems we address for the project."
 - "Asking for our input more about what to do during breaks."
 - Encouraging participants to help each other.

PERCEPTION OF PARTICIPANT ACHIEVEMENT

We provided participants with the following observations of the group to prompt their thinking on how they and their peers demonstrate achievement of this outcome:

OUR OBSERVATIONS OF YOUNG ADULT PARTICIPANTS

Participants show their confidence and self-esteem by:

- ◆ Lead and collaborate with peers to create social stories as a group, such as:
 - Posing each other for pictures, and
 - Discussing their museum experiences together.
- ◆ Have a “dance party” in an empty gallery

Participants said they and their peers show confidence and self-esteem when:

- ◆ **Participation in the program:** Five agreed “actively” engaging in the program’s activities, ranging from making notes on museum visits or posing for social story photos to their “willingness to collaborate” demonstrates confidence and self-esteem. One of these said their peers demonstrate confidence by “not being beholden to anxiety or fear of a new situation” when participating in the program. Another agreed leading program activities also shows self-esteem.
- ◆ **Expressing their opinions:** Three agreed sharing ideas, opinions, feedback, and jokes shows confidence; one of these said peers display confidence when they “are open about their opinions and give good feedback in an appropriate way.”

MUSEUM PROFESSIONALS - INTERVIEWS

Between December 2017 and January 2018, after the program ended, RK&A interviewed 10 museum professionals about their experiences with SPECTRUM. Of the 10 participants contacted about an interview, all agreed to participate. The interview took place over the phone, and the interviewer took detailed notes to facilitate analysis. The evaluator typed notes during each interview, recording responses as close to verbatim as possible.

Museum participants who are staff at The Nat engaged with participants the most, including attending the introductory/kick-off meetings with staff and advisors, hosting participants at their home institutions, and facilitating the program as museum staff. Five museum participants are program staff, including an experienced occupational therapist (OT), and thus had a high level of involvement. Staff facilitated the four-hour meetups by managing logistics (including the meeting space), providing materials and guidance on project work, engaging participants in group or one-on-one discussions, and offering various supports to participants throughout. Most staff attended all meetups or only missed one or two. When appropriate, these participants are referred to as “staff” throughout.

Museum participants from other institutions in Balboa Park had varying levels of engagement with participants. These five participants (“museum professionals”) are from the following institutions: Fleet Science Center (Fleet), Japanese Friendship Garden (JFG), Museum of Man, Museum of Photographic Arts (MOPA), and the San Diego History Center. Of the museum professionals, three were highly engaged in the project: they attended the kick-off and mid-project meetings and met the young adults at The Nat and/or for most of the participants’ museum visit to that professional’s institution; and, one of these participated in the grant-writing process. One professional was moderately engaged—they attended the kick-off meeting and mid-project meetings, and met participants briefly. One, who was minimally engaged, only attended the kick-off meeting and did not meet any participants.

Museum participants had a range of knowledge of and experience working with individuals on the autism spectrum before joining the project. Three had deep knowledge of ASD and/or young adults with ASD in particular; for instance, they have taught special education and completed relevant coursework, work as an occupational therapist for individuals on the spectrum, or have a family member on the spectrum. Four had introductory knowledge of ASD; that is, they have met someone on the spectrum or have some experience working with individuals with ASD at museums (including as part of the public at large). When asked, a couple of these mentioned learning new details about ASD from the kick-off meeting, or that they “didn’t realize” individuals would face certain challenges at museums, or lack social and community services. Three had no or cursory knowledge about the autism spectrum.

INTEREST IN SPECTRUM SOCIAL STORIES PROJECT

When asked what interested them about the project when they agreed to join, responses include:

- ◆ **The audience:** Five shared particular interests about the audience. Three wanted to learn about engaging young adults with ASD, either because their institution does not “specifically” create programming for autistic people, or because they lack experience working with the audience in a museum setting. One program staff’s interest in the audience stems from the opportunity for young adults on the spectrum to “work as a collective group to provide something of value back to the community” in ways that are not explicitly tied to therapy. Another program staff, who is an experienced occupational therapist for people with ASD, thought the opportunity to work with adults appealing because they typically work with children.
- ◆ **Element of co-creation:** Four were interested in participating because of the tenet of “co-creation.” This made the program stand out because young adults on the spectrum (rather than neurotypical individuals) were creating social stories “in their own voices,” which are both useful to participants and “people like themselves.”
- ◆ **Accessibility:** Three described interest in helping museum visitors with ASD navigate “barriers” to the museum experience, such as with social stories. One of these (staff) noted that most museum programming for people with ASD is for children, and since “little kids with ASD grow up to be adults with autism,” the museum community should think through “what that means” for the field at large.
- ◆ **Collaborating with other museums:** Three were interested in “the shared learning aspect” of partnering with other museums in Balboa Park to learn about young adults with ASD.

MOST MEMORABLE EXPERIENCE

Asked what was most memorable part of participation in the project:

- ◆ **Interacting with participants:** Five, all program staff, found a “sense of connectedness” from spending time with participants and sharing interests most memorable. For instance, one bonded with the young adults over a shared interest in museums. Another of these enjoyed the “intensity” of the meetups which required a certain “presence and energy” to manage. One staff was “surprised” by “how we all came to love and adore them,” because the relationships were unexpected.
 - Three program staff also said “seeing the growth” participants displayed in taking on leadership roles, “coming together as friends,” and transforming the experience into a “co-creative project” were memorable aspects of the project. One museum professional also enjoyed observing the how the program “bonded [staff] and the participants.”
- ◆ **Getting feedback about museum from participants:** Two from other institutions in Balboa Park most enjoyed the “critical” and “eye-opening” feedback from participants about the individual’s home institution. For example, participants pointed out “high-sensory” elements [e.g. noise, bright light] and other “challenges they anticipated others on the spectrum” would find overwhelming. One of these said hearing positive comments about the museum from participants dispelled their assumption that participants would consider their museum totally “off-putting.”
- ◆ **Orientation workshop at The Nat:** Two professionals said the most memorable part of their experience was participating in the project’s kick-off meeting, which gave them “a better understanding of what ASD is.” One said that the speakers’ diverse perspectives contributed to knowledge-building, and the other described learning new information about challenges facing young adults with ASD, such as transitioning to adulthood and lacking support services.

WHAT WAS THE MOST MEMORABLE PART OF YOUR PARTICIPATION IN THE PROJECT?

“It was amazing to see that transformation...that it wasn’t us guiding it; it was a more co-creative project, since it was an iterative process, they could act more on their personal agency in a way where they were having to negotiate each other.”

—Museum [staff] participant

MOST CHALLENGING EXPERIENCE

Asked what was most challenging part of participation in the project:

- ◆ **Supporting participants' needs:** Four program staff said offering support to participants was challenging at times, for a few reasons. Note that these comments come from most program staff, including the OT with decades of experience working with individuals with ASD. One said it was challenging to determine when and how much support to provide participants. They shared an example about a participant who engaged in discussion from underneath a conference table: “How do I look at this? In the ‘real world,’ you couldn’t do this. So, do you try to shape and correct that behavior, or let it go because she’s still here participating?” Another, who had only cursory knowledge of ASD, also perceived a “deficit” in identifying when and how to support participants. Another said the challenging aspect was being unable to anticipate *when* participants “would get overwhelmed emotionally or sensorially.”
- ◆ **Time management:** Three program staff said it was challenging to ensure that “we gave [the project] the time it needed.”
- ◆ **More involvement:** Three museum professionals said it was challenging “to only see a secondhand view of the project and how it was evolving.” One, who had a conflict when the young adults visited their museum, would have liked to participate; the other two hoped for “more exposure,” such as by having more visits with the young adults.
- ◆ **Nothing:** Two, who had moderate/minimal involvement, shared no challenges.
- ◆ **Not making a connection:** One staff found it challenging to connect with “more distant” participants, naming those who communicated verbally only infrequently or with prompting. They questioned the reasons why connections went unformed, such as “the way the program is structured or because of who they are as individuals.”

CHANGES IN PERCEPTION OF YOUNG ADULTS WITH ASD

When asked to reflect on changes in their perception of young adults on with ASD:

- ◆ **Awareness of engagement strategies:** Four discussed a new or deeper understanding of strategies for engaging individuals on the spectrum in a museum setting, such as tapping into their “specific interests,” using social stories, and using museums to support social interaction. One of these described reflecting on their own “effective communication” after working with the young adults, and noted “it’s changed the way I think about how people communicate” as a museum educator generally.
- ◆ **Understanding autism as a spectrum:** Three described greater understanding of “how diverse the spectrum really is.” Two said a common refrain from the group (“If you’ve met one person with autism, you’ve met one person with autism”) “rings true.” Another staff member expressed deep desire to learn about ASD, and the “unifying thread” that is ‘autism.’ Engaging with the young adults helped them develop a new understanding of autism as a “suite of settings...set at different levels” for different people.
- ◆ **Understanding ASD and anxiety:** The occupational therapist said their perception of the audience has not changed, but that they have a better understanding of how certain challenges, particularly anxiety, impact “that comfort level of being able to engage in comfortable environments.”
- ◆ **Meeting youth on the spectrum:** One, who had moderate participation, said meeting the young adults “personally opens the heart a little more” in service of inclusion.
- ◆ **Developing leadership and recognizing interpersonal intelligence:** One said their perspective shifted when participants “started taking ownership” of the project over time. “At the beginning,” they said, staff led the process for create social stories. By the end of the project, staff “assigned roles” (photo scout, project manager, photographer, etc.) so participants were “driving the process of what needed to be done.” This respondent also recognized displays of empathy in a few participants, which stands out because of the common perception that “those on the spectrum don’t always have empathy.”

HOW HAS YOUR PERCEPTION OF ADULTS W/ ASD CHANGED SINCE THE BEGINNING OF THE PROJECT?

“I came a way with a much more solid thread of how that suite of challenges people with autism face can manifest differently in different people. Some might deal with sensory issues, but not struggle with social connection, and vis-versa. I was able to see for myself what that actually means, how the people are the same in these ways and could understand each other’s experience because of what was shared. The impression I came away with was sort of a sliding scale, like editing a photo with changing the contrast and saturation and all those things, so it’s all different points on the continuum, in the same photo. Since it’s a suite of settings, different people are set at different levels for each one of them; and depending on those, they have slightly different challenges.”

—Museum [staff] participant

PERCEPTION OF ACHIEVEMENT OF MUSEUM PARTICIPANT GOALS

Participants were asked to explain how the program helped them in the following three areas: (1) gain awareness and knowledge of adults with ASD, (2) learn to successfully engage adults with ASD, and (3) increase sensitivity towards the needs of adults with ASD.

- ◆ **Spending time with the young adults:** Six (including all staff) said “interacting” with the young adults helped them internalize one or more goals because spending time with the group is much “different than hearing about [ASD], or reading about it, or having someone explain to you what it’s like.” A few of these, all staff, said spending four hours together every three weeks for a year helped staff develop “a better understanding” of participants’ range of abilities and personalities, which helped to “demystify” autism. The year-long timeline helped “build trust” among staff and participants, creating a forum for the young adults to ask for and accept support, and to “articulate” their experience with autism. All six agreed that “hearing it from [participants]” helped the professionals understand ASD, engage the young adults, and increase their sensitivity. For example, one staff described how they will “carry” the program experience into their exhibition design work by increasing sensitivity to sensory overstimulation, “even down to the consideration of textures and seating.”
- ◆ **Ability to engage is unmet or unmeasured:** Three shared concerns about “successful engagement.” Two of these (moderate or minimal participation) said they would not know how to “apply” the techniques discussed in the meetings, or how to “institutionalize” engagement strategies at their museums. One staff was unsure “how to measure” engagement; that is, they explained “the deeper engagement was social,” rather than a means to an end (i.e., a strategy to facilitate project work).
- ◆ **Information shared at project meetings:** Three said the initial meeting discussions about ASD and related challenges, including engagement “techniques,” helped with increasing knowledge, sensitivity, and strategies for engagement. One of these said the information increased their museum’s understanding of how to work with adults with ASD, but that it was more of a “first step.” One, who was minimally engaged, said hearing multiple perspectives on ASD was “inspiring.”

“THE DEEPER ENGAGEMENT WAS SOCIAL”

“Successful engagement is hard to measure. We didn’t realize how important the social aspect would be. That’s where I felt the most engagement, when we were connecting over shared interests, and I could show them things I was doing they were interested in, and when we were out in the other museums. There was the task at hand, trying to create the social story and taking those notes, but the deeper engagement was social; I was pointing things out that we liked, that we were looking at, artwork people were interested in, finding places we liked, revisiting places we liked. That was deeper.”

—Museum [staff] participant

SUGGESTIONS FOR SUPPORT

When asked how, if at all, the project team could have better supported them to achieve the goals⁸, responses centered around a few ideas:

- ◆ **Staffing capacity:** Three program staff agreed that support “all comes down to staff and capacity,” for a few reasons. One of these said it felt “like a scramble” when preparing for meetups or “carving out the time” to work on the social stories in addition to their other work. Another of these said staff capacity could be increased with support from a second occupational therapist who can “scaffold” strategies for staff to increase their ability to support participants. Another of these valued staffing four museum professionals plus the occupational therapist because “it helped to build that comfort level,” and because working on the project has increased the museum’s ability to incorporate lessons learned from this project in other departments and programming.
- ◆ **Stronger connection to project work:** Two, who are not program staff, hoped for more opportunities to connect with the project or participants in the form of updates on “where they are, where they ended up, did they create the social story,” and whether there plans for upcoming meetings. One of these hoped for museum-specific “formal set of recommendations” from participants, such as insights on the museum’s “physical space” and suggestions for what “kinds of programs” would be appealing to the young adults, and what “considerations” the museum should take in planning programs and preparing visitors with ASD for the museum experience.
- ◆ **Institutional collaboration:** Two suggested offering support through institutional collaboration in Balboa Park, such as adding “programming around the park.” One of these suggested a “park-wide accessibility training” because access is “a substantial consideration for museums across the country.”
- ◆ **Adequate support/no feedback:** Two did not share suggestions for improvement. One said the staff provided “adequate support” by making time and effort to “communicate” about planning for the meetups and reflecting on them afterward.

STAFF PARTICIPATION SHIFTS PERSPECTIVE ON MUSEUM INTERPRETATION

“By having the different staff participating in this, it’s allowed us to be better interpreters than we would have been a year ago because we have had this opportunity to visit so many different museums and get to know the YAs with ASD and how they experience museums, and what that experience is like for them. This is more than just producing the social stories, but it is a different way of looking at how we do things.”

—Museum [staff] participant

⁸ (1) Gain awareness and knowledge of adults with ASD
(2) Learn to successfully engage adults with ASD
(3) Increase sensitivity towards the needs of adults with ASD

PERCEPTION OF YOUNG ADULT PARTICIPANTS' EXPERIENCE

Museum professionals were asked about their observations of young adult participants' experiences. When asked what worked well, most shared multiple ideas, include:

- ◆ **Program structure:** Eight shared comments about the program's structure. All staff reached consensus on value of the program's iterative nature (meeting at the same place at the same time, seeing the same people, doing generally the same tasks in the same order—i.e., a sense of routine) provided a “framework” for participants so staff could “hand over more control on content-creation.” One highly engaged professional observed staff asking questions that invited participants to “drive the process,” such as how to record or how to represent their findings. Two professionals, with moderate/minimal involvement, said the young adults benefited from “flexibility” in scheduling, structure, and goals.
- ◆ **Bonding over shared experiences:** Five said the group's dynamic and relationships were an important element of young adult participants' experiences. A few described a “magical” conversation among participants about “what they wanted of the world and what they wanted the world to know” about ASD and their museum experiences. All staff agreed that “you could see those bonds tightening” as participants discussed their experiences with autism, school, and museums together. Two professionals noted that staff tapped the participants' “specific interests” to facilitate “relationship building.”
- ◆ **Occupational therapist:** One program staff said the OT and their approach was “absolutely critical” for the project because the participants could rely not only on museum staff to “facilitate redirection and prompting,” but also get support from the OT in more challenging instances. They also said program staff watched the OT for “tools that they used in their regular practice” so staff could “emulate” the techniques.
- ◆ **Feedback to museums:** One said the occasional opportunity for the young adults to provide feedback to the museum participants about their experience made the young adults “feel like they were being heard” by an authentic representative of that museum.

PARTICIPANT DIALOG ABOUT SHARED INTERESTS

“When we could get them talking about their interests between each other, so it wasn't just reciting what they like about *Star Wars*; when [they were] truly engaged in back and forth dialog, those moments felt really good.”

—Museum [staff] participant

IMPROVING YOUNG ADULT PARTICIPANTS' EXPERIENCES

Asked their opinions of what could be improved for the young adults:

- ◆ **Support structure:** Three staff discussed best strategies for offering support for participants' needs. One considered how to lessen the burden of participants' sensory processing challenges, potentially by supplying headphones or giving them "permission to say, 'this is too much for me.'" Another staff noted "opportunities" to "workshop" skills (e.g. perspective-taking) more explicitly. The OT reflected in detail about the benefits of the program's supportive "teaching model," versus a large-group or otherwise traditionally therapeutic approach; they offered the following example:

"HOW DO YOU ENTER A GROUP? WHAT ARE THE SKILLS TO ENTER A GROUP?"

"You would see that I have an image in my head... We're at one of the museums. [Participant] was going to be the photographer, but no one was listening to them. And [participant] was frustrated; what they didn't get was how to enter the group; they're shouting out, basically to ceiling... [After 1:1 intervention] they approached the group and got the response they wanted, and I gave them a thumbs-up."

— Occupational therapist

For this reason, the OT believes "the beauty of this program" is that, "because they were doing something purposeful, it allowed for all those nuances to come up and be dealt with in the moment, in real life, which has a more lasting impact on anybody than sitting in a classroom and being taught a social script."

- ◆ **Engaging everyone:** Three wondered about methods to engage all participants. Two program staff felt they could have done more to ensure "everyone's voice was heard" regularly, and suggest finding a way for participants who do not frequently communicate verbally to "meaningfully contribute" rather than passively participate. To that end, the OT suggested experimenting with smaller breakout groups where participants can take ownership of a specific role or responsibility. A staff also suggested "clarifying or emphasizing" project roles earlier in the project timeline, and "reinforcing collaborative team skills" in addition to dedicated "social time." One professional suggested offering participants other "modalities" for taking notes.
- ◆ **Timing and logistics:** Three discussed the meetups' execution. One program staff (OT) "questioned" the meetups' length, and reflected on the pros ("dealing" with attending a four-hour program is a "good skill" for the young adults to learn) and cons (less time is a "more comfortable" experience) of the program's length. Another staff discussed instances in which staff "improvised with the schedule" by allowing participants to roam the museum when there was extra time at the meetup. Similarly, to keep participants on track with project work, one staff reflected that adding more "prompts" would create more "structure within" project work, since participants "got the rhythm" of project work and the meetups' routine with each iteration.
- ◆ **Involvement at museum:** One museum professional suggested participants "choose an interest area or museum" to create their own social story about, and become involved with staff at the host museum.
- ◆ **See the product:** One staff said ensuring participants could "see the product of their work" would have improved the young adults' experience.

SUGGESTIONS FOR REPLICATING PROGRAM

When asked about what someone replicating the project might do similarly:

- ◆ **Program design:** Five discussed elements of program design. Two program staff emphasized the benefit of a long-term program to allow participants to “open-up” over time. The OT also noted the importance of this “processing time.” Another program staff suggested keeping the group’s small size because of the demand on staff attention.
- ◆ **Occupational therapist:** Three said the OT was “essential” because they “put into context the things they were seeing from their perspective: behavior, how to speak to them and manage them, and cuing them,” in addition to the changes staff made “based on their recommendations,” such as purchasing fidgets.
- ◆ **Social/relationship development:** One staff emphasized the importance of dedicating time to social interaction. One museum professional observed that participants “built a community within themselves,” inferring this dynamic was possible because participants were close in age, spent a year together, and shared a “vested interest” in the project.
- ◆ **Collaboration between museums:** Two said “involving multiple kinds of institutions” was beneficial to participants because it provided a variety of experiences to consider.
- ◆ **Flexible expectations:** One museum professional liked the expectation The Nat set for the program, or “the goal is to create social stories for all the organizations, but that given the reality” of the program and its audience, that “might not happen.”
- ◆ **Iterative structure:** One said “the combination of consistency of structure each meetup” and the length of time allowed participants’ skills to “grow with the scaffolding of the structure over time and repetition.” Similarly, another suggested to “let them act on their own agency” and “give them control” over the project “quickly.”
- ◆ **Professional development:** One suggested offering more training for “strategies on being supportive, and how to best identify when participants are in need of support.”

When asked about what someone replicating the project might do differently:

- ◆ **Relationship with museum partners:** Five discussed “integrating the museum partners” to develop stronger relationships and increase participation. One staff described an instance when museum professionals came to “hear feedback” from participants about their home institution, and suggested doing this more so museum partners can “hear *and* create.” Two museum professionals hoped for more updates from the museum about the project’s progress through the year; one suggested participants each spend more time with a single institution to “help the institutions use the social stories” by creating a blog post or rack card for the museums to display.
- ◆ **Length of time:** Four shared concerns about the meetups’ length. Two of these suggested more frequent but shorter meetups because they observed “communication at that level requires a lot of physical and emotional energy” and, toward the end of the day, staff observed participants “fraying at the edges.” Another noted that the three-week space between meetups was a barrier to “jumping back in” to project work. The OT said there is “good and bad to both” keeping the length or shortening the meetups.
- ◆ **Staffing:** One staff advised that “facilitators hold themselves accountable to delivering...the social stories as they are developed.” Another suggested museum educators, who are typically practiced in program facilitation, be included.