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Exploring How Live Theaters Promote Participation for Children with Special Needs

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ABSTRACT

Aim: Increasing usage of cultural arts venues by children with special needs has created a need to optimize participation planning. A team of three occupational therapy graduate students and one faculty researcher was invited to provide a local children's theater staff with training for supporting children with special needs. The team aimed to determine how their collaboration with the theater could contribute to understandings of best practices in community participation planning. **Method:** The team participated in theater events, conducted a facility assessment, interviewed staff members with varying role responsibilities, and surveyed staff before and after conducting a participation-planning workshop.

Results: The collaborative approach to participation planning utilized strategies that provided practical applications for theater staff, including planning for sensory processing and regulation challenges, and providing staff with behavior management and communication tips for interacting with children.

Conclusion: Through training, staff participation planning evolved from reacting to present-day problems to proactively planning for future initiatives. Staff expressed desires to have some of their own members become in-house experts for participation planning, allowing others to pursue the theater's mission: providing live children's theater performances and programs.

ARTICLE HISTORY

KEYWORDS

Communities; cultural arts; fieldtrips; live theater; occupational therapy; participation

Children who participate in community events with their families or as a part of school field-trips, may have sensory sensitivities and processing disorders that can limit their ability to tolerate the amount of sensory input a theater production, program, or class can generate. For these children, attending events characterized by crowding and close proximity to others, and with little control over the event's pace and timing, can cause high distress, often inhibiting participation.

While participation has a positive impact on children with challenges (Elsabbagh et al., 2014; Lam et al., 2010; McConkey et al., 2012), community venues may struggle to provide optimal experiences for each child, whether on a family outing or fieldtrip, especially if staff have little experience or training in interfacing with children who have special needs (Benvenuto et al., 2016; Vernon et al., 2012). Planning for participation challenges may result in community venues learning about children's health and developmental conditions

through the internet, with resulting knowledge of conditions and confidence in their abilities to meet varying child needs not being well-aligned with the realities of providing appropriate spaces and programs for all visitors. As one example, staff members may not be able to effectively judge what they know about conditions like autism spectrum disorders, which have a rapidly changing knowledge base and many related misconceptions (Schellchase et al., 2015). To more effectively meet participation-planning challenges, some venues reach out to community members such as, occupational therapists, who might help them more effectively engage with children with a variety of challenges.

Experiencing a period of robust growth and increase in cultural amenities, many live venues in Dallas, Texas aim to provide entertainment for families and children on fieldtrips as part of their mission and goals, including Dallas Children's Theater (Forbes, 2016). The theater contacted the occupational therapy professor and expressed interest in collaborating with the school to help them create optimal programming for children with special needs. At the time, the children's theater offered eleven productions per year, an arts-in-education program for local schools, children's theater, teen conservatory classes, performing arts camps, miniclasses, sensory-friendly classes, sensory-friendly and American Sign Language-interpreted performances, after-school drama classes, a theater academy, and a national touring company. In 2013, they began producing sensory-friendly performances using adapted lighting and sound, a section of interaction-free seating, and designated quiet break rooms, and later expanded offerings to include sensory-friendly classes with the same accommodations (Dallas Children's Theater, 2015). Through these avenues, the theater continues to serve approximately 250,000 children and adults annually.

The aim of this study was to formulate recommendations for best practices in on-going participation planning between theater staff and occupational therapists. The following questions were addressed:

- 1. What is the relationship between staff knowledge and confidence to how well their programs serve children with traits and conditions that limit participation?
- 2. How can occupational therapists support participation planning for children with traits and conditions that limit participation?
- 3. What factors contribute to successful collaborations for participation planning between arts, culture, and entertainment venues and occupational therapists?

Methods

Research Design and Frame of Reference

An exploratory mixed-methods case study was used to understand how collaborations between occupational therapists and community cultural arts venues could impact programming and build participation-planning capacity. This research was aligned with Yin's (2014) case study research method, which investigates phenomena in a real-world context and sheds light on questions not yet clearly defined or understood. The institutional review board at Texas Woman's University approved this study and informed consent was obtained from participants. The research team included an occupational therapy pediatrics professor and three second-year masters of occupational therapy students.

This research was also grounded in the occupational therapy Person-Environment-Occupation (PEO) model (Law et al., 1996), holding that interactions between a person, the environment, and their occupations result in occupational performance. In this case, the team conceptualized the PEO component of *person* as a child with traits or conditions that may limit participation, and the component of *environment* as the children's theater, including staff and the facility. *Occupation* was conceptualized as theater programs.

Participants

Six theater staff responded to a request to participate in face-to-face surveys. They represented a range of positions at the theater, including two from education staff, one from access and participation planning, an actor, a member of the business office, and a representative from ticketing and reservations. These individuals, along with six additional members of the education team, participated in the training experience.

Procedure

Over a four-month period, researchers interacted with theater staff through the following activities: a site visit, a pre-training face-to-face or online survey, volunteering in sensory-friendly performances, staff training, and a post-training online survey. To strengthen the rigor and transparency of this research, the team conducted member checking during interviews, individually maintained audit trails, and corroborated impressions of site visits and the training session. Theater staff members were highly interactive with the team, and throughout the four months of active contact with them, they asked questions and shared additional observations and thoughts during all phases of research.

Site visit

As a first step, one team member toured the facility with the staff member in charge of participation and access planning. The staff member focused on the facility's Americans with Disability Act (ADA) compliance, but also identified discrepancies where she felt compliance was in order but environmental aspects impeded quality participation planning, such as lack of preferred front row wheelchair-accessible seating. The researcher made field notes and used the *Sensory Audit for Schools and Classrooms* (Attfield et al., 2012), which provides standards for environmental modifications based on universal design concepts. This tool facilitates data collection on the visual, noise/sound, smell, touch/feel, and general sensory aspects of environments (Attfield et al., 2012).

Pre-training survey

The research team created and utilized a survey based on one they previously designed to ascertain how arts and entertainment venues in the Dallas area engaged in participation planning for visitors with special conditions. The original survey was adapted to fit the present research study aims and ensure questions were relevant for theater participants. Using a four-point Likert scale, the resultant survey asked participants to rate their knowledge of and confidence in their programs, facility, and themselves to meet needs of children with orthopedic, speech, or vision impairments, intellectual disabilities, emotional disturbances, or autism. Open-ended questions asked participants to describe their views on current needs of their program, facility, and themselves related to participation planning. Additionally, participants were asked to describe their theater role.

Researchers created two versions of the survey using (2013), a secure online survey software tool, to collect pre- and post-training data. The surveys were comprised of four qualitative, 18 quantitative, and two demographic questions. The staff access and participation

planner sent an email recruitment flyer to all theater staff. After reviewing the flyer, six participants volunteered to take part in face-to-face surveys. These participants represented differing organizational strata of the theater, and their range of role responsibilities provided views on participation planning from different vantage points, helping ensure pre- and post-training data would fully reflect the breadth and depth of their participation planning.

After the researchers completed face-to-face surveys and concluded they were appropriate to the theater, a link to an unchanged online version of the pre-training survey was distributed to additional staff members in two email invitations posted by the staff access and participation planner. While larger numbers of staff were anticipated to complete the online version, only three did so.

Narratives of sensory-friendly performances

To further understand the theater, each member of the research team served as volunteers for one to two performances advertised as sensory-friendly, and wrote narratives of their experiences and impressions. These experiences were comprised of pre-performance arts and crafts, photo booths, interactive clown skits, and a sensory-friendly performance, characterized by adaptations of semi-darkness, reduced volume, interaction-free seating zones, and designated quiet areas in two adjacent studios. Individual reports included observations of the physical environment and holistic impressions of the programming and were collated into one report that was referenced while planning the training.

Staff training

After site visits, interviews, and pre-training surveys were completed, the research team conducted a training for twelve staff members, using data collected to reflect participants' expressed interests and needs. These were aligned to practice guidelines for occupational therapists working with individuals with special needs (Frolek-Clark & Schlabach, 2013; Tomchek & Koenig, 2016). In the four-hour training time requested by the theater, the team collectively decided upon training supports. The highly interactive training session placed a heavy emphasis on learning strategies related to grading and adapting environment and occupation components described in the Person-Environment-Occupation model, rather than the person component.

To plan for facility needs, the team provided physical disability and autism simulations including wheelchair use in classrooms, entrances and exits, and bathrooms. Participants completed one of the observed pre-performance art activities from a wheelchair, with vision and hearing occluded, or with distracting levels of noise playing in headphones. Participants also accessed a temporary sensory room comprised of evidence-based tactile, visual, and movement supports created by the team for the training. To plan for *program* needs, participants learned strategies to meet sensory behaviors that may be seen at the theater, and learned how to create picture schedules and social stories. To help meet *personal* needs by increasing their knowledge and skills, participants learned strategies for interacting with children having participation challenges, received information sheets about conditions discussed in surveys, self-assessed of their own sensory needs and behaviors, and used wheelchairs, vision simulators, and swings providing vestibular, tactile, and proprioceptive input.

Post-training survey

Following training, participants who participated in the pre-training survey were sent an online post-training survey link. The post-training survey prompted participants to use a four-point Likert scale to rate their post-training personal knowledge, confidence, and how



well the theater met the needs of individuals with each of the conditions previously explored. Three free-response questions queried participants' perceptions and opinions regarding pragmatics associated with the training length, content, and desired specific outcomes. Seven participants took the survey and responded to short-answer questions, and six of these completed the Likert confidence scales used in trend graphing.

Data Analysis

Pre-training data analysis

Site visit. Prior to the training, the team visited the Dallas Children's Theater. Using the *Sensory Audit for School and Classrooms* and staff member discussion of ADA compliance items to guide observations, the team produced an inventory of environmental modifications and accommodations implemented during participation-planned events.

ADA compliance was in order for the facility, although additional Braille signage was identified as a need by the staff. Modifications and accommodations included using ambient house lighting and reduced volume during events, providing tip sheets regarding preparation for loud, sudden sounds or actor encounters during performances. Additionally, two empty brightly lit studios were designated as quiet rooms during each sensory-friendly performance. Established practices related to addressing touch and feel standards of the sensory audit included comfortable seating in large theater spaces and use of floor cushions during select performances. Verbal accounts of preparatory social stories, past use of designated back row interaction-free zone during interactive performances, and available preferential seating placements were identified as primary strategies related to general sensory issue standards. The access planner also described efforts to actively encourage visitors to disclose aspects of performances found to be distressing via surveys collected after each performance.

Pre-training data. Analysis followed three steps. First, to immerse themselves in the data, the team produced transcripts of each face-to-face survey, resulting in six transcripts. Two researchers independently coded three of the six transcripts felt to represent different view-points and interview styles, first engaging in open coding to remove all extraneous data. After comparing results, each individually engaged in further coding the three transcripts, identifying emerging categories or themes. After comparing them, researchers engaged in axial coding, reorganizing data nodes into emerging categories. The team then met to discuss emergent themes, derived and defined codes, and discussed both agreements and discrepancies to ensure reliability. Using these, they worked together to fully code three interview transcripts into final categories.

After initial analysis of the first three interviews, one researcher coded the remaining three interview transcripts using the newly defined categories of Capacity Building, Role Relationships, Mission and Goals, Continuum of Focus, and Facility Access. The second phase of pretraining data analysis followed. Face-to-face and online surveys were merged. The resulting short answer themes and code definitions are identified in Table 1.

Third, the researcher merged the six face-to-face and three online Likert responses resulting in nine datasets. Upon review, the researchers agreed participant definitions of *knowledge* varied so widely that describing it with quantitative methods would be inaccurate and misleading. Therefore, only descriptive statistics for *confidence* score means were used to analyze differences between pre- and post-training confidence ratings.

Table 1. Interview themes with code definitions and subsets.

Capacity Building: Venue's abilities versus what experts offer.

- Logistics of expert training (frequency and duration)
- How experts contribute (visions for the future versus solving current problems)
- Pragmatics of optimizing access (how access planning becomes automatized and secondary to meeting venue mission and goals)

Role Relationships: How experts contribute to venue mission and goals.

- Becoming in-house experts
- Reaching the audience
- Interacting with visitors and family members

Mission and Goals: Focus on what the venue promotes.

- Increasing access and use of what the venue promotes
- Increasing interest in what the venue promotes
- Being sustained and empowered by what the venue promotes

Continuum of Focus: Focus on the respondent versus focus on the visitor.

- Participant attributes, knowledge, skills
- Visitor attributes and needs while at the venue

Facility Access: How the venue facility promotes access.

- Compliance with concrete, tangible regulations such as Braille and wheelchair use
- Providing quality participation planning/access such as sensory calming and emotional regulation zones

Post-training data. Analysis followed two steps. First, post-training online short answer responses were coded and analyzed using the same codes and procedures as the pre-training responses. Second, Likert responses from confidence score means of the seven post-training surveys used to analyze differences between pre- and post-training confidence ratings.

Results

Pre- and Post-Training Data Comparisons

From qualitative short-answers, it appears the training provided staff with enough knowledge to devise some of their own solutions to their challenges associated with participation planning. Secondly, these responses reflected evolving views of how to meet their environmental and programming needs. Response comparisons are shown in Figure 1.

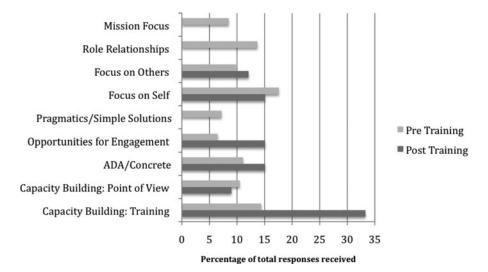


Figure 1. Pre and post training short answer comparisons.



Facility needs

Data analysis reflected a move from staff's pre-training focus on observable ADA accommodations such as wheelchair seating to a strong post-training interest in providing space and opportunities for families and students on fieldtrips to have meaningful experiences. For example, in pre-training responses, several staff made statements such as, "We may need more areas for wheelchair seating." Post-training responses evolved to reveal progression to focus on universal design concepts of approachable and meaningful use. Statements such as, "We need a family restroom" and "We need better hallway mobility on the production side of the building" underscore the change from being compliant to being interested in creating functional environments for children with participation challenges. Some responses also exhibited an awareness of the diversity of needs, the complexity of attempting to meet all unique needs with a single program, and noted the facility's need to be prepared for children with wide ranges of participation challenges.

Program needs

Desire for training and collaboration increased, suggesting more clarity in staff's perceptions of what outside collaborators might be able to contribute to their participation planning. Short answer responses evolved from passive pre-training *being taught* how to promote effective programming, to active post-training *practicing* to build skills. The staff shared, "We need more experience and feedback with our programs" and "We will need continued training." This progression suggests that sustaining a collaborative relationship with community experts in multiple trainings across time would enable them time to reflect on and practice increasing skills, promoting increased autonomy and success in realizing mission-centered goals.

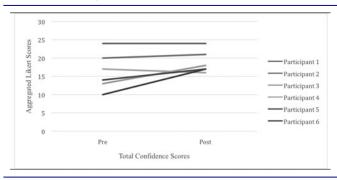
Personal needs

Reported personal needs echoed program needs regarding building knowledge. Pre-training responses such as, "I would love to obtain more knowledge about these special needs, so that I can efficiently approach and assist visitors" and "I would want to know the right way to approach and the right words to use, so that I could make them feel included . . . " heavily focused on desires for learning, training, and finding simple solutions to address behaviors and facilitate participation. Post-training responses reflected a desire to apply knowledge gained and to have "... more hands-on experience with visitors," suggesting participants wanted more practice. Post-training data also showed staff desired to be proactive in meeting needs and to increase the numbers of special programs, seeking to know " ... what parents want to know about ... getting involved with the Dallas Children's Theater." In general, when asked what they wanted to learn, staff responses evolved from a self-focused reactivity, seeking " ... the most effective ways to speak to [children with special needs] and respond to things they say or do," toward a proactive focus on others, seeking to " . . . understand better the specific needs of different abilities and how to make them feel welcome and comfortable." An interesting evolution for some occurred, reflecting a shift from wanting to provide maximal assistance to visitors to recognizing that over-assisting could hinder engagement in the experience, wondering " ... if my help is hindering or helping them."

Scaled confidence scores

Researchers compared means of pre- and post-training confidence Likert scales to explore emerging trends and gain rudimentary insight into how confidence changed as a result of

Table 2. Trend analysis of staff confidence scores.



training. Comparisons of Likert scale means for pre- and post-training confidence scores related to all of the special conditions were compared using a trend table. Table 2 shows the changes after training: with increased confidence in four participants, one remaining unchanged, and one declining.

Discussion

With respect to the research questions, they were answered in part, but opened doors to other questions to be explored to gain a fuller understanding of the complexities of participation planning between cultural arts venues and community collaborators. Research question one explored the relationship between staff knowledge and confidence to how well programs serve children with traits and conditions that limit participation. Due to varying participant definitions in the online and face-to-face surveys, descriptive statistics for *knowledge* were not used to compare the relationship between knowledge and confidence among the participants. However, most participants reported moderate knowledge and confidence when working with children with special needs, and participants who reported lower knowledge also reported lower confidence. Despite differing levels in perceived knowledge and personal confidence, most participants reported moderate to high confidence in their program's ability to meet at least some needs of children facing participation challenges. To emphasize this, some expressed pride in the theater's collective participation-planning efforts, and one specifically commented on the bravery involved in acknowledging what they did not know, and requesting assistance from occupational therapists.

Research question two explored how occupational therapists could support participation planning for children with traits and conditions limiting participation. Participants were clearly nurtured and supported by their mission to extend a love of theater to others; however, their formal training did not appreciably contribute to their knowledge of how to do this. This suggests that training, experience, and mentored practice can augment and optimize participation planning in live theater venues.

Research question three examined factors contributing to successful collaborations for participation planning between arts, culture, and entertainment venues and occupational therapists. During the four-month course of this research, the collaboration between theater staff and therapists' beliefs did not perfectly align, suggesting community experts should immerse themselves in a venue's culture before making any recommendations. This also suggests the expert instructor model should be abandoned in favor of a collaborative model, using mentorship to facilitate effective participation planning.

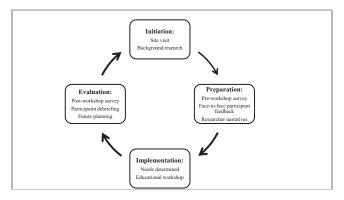


Figure 2. Cycle of venue and outside expert collaboration.

Implications for Collaborations with Community Organizations

We recommend that supportive education, training, and practice experiences focus on visitor characteristics and behaviors, rather than a specific diagnosis. In this live children's theater, the team's most valuable contribution may have been to support theater staff who expressed concerns related to simple communication and behavior management strategies, and by helping them more fully understand the complexities of conditions that limit participation. Accessibility related to building use and modifying environments to promote desired behaviors and interactions are contributions of occupational therapists as building use changes over time, and as new staff join the theater.

The research team was unable to achieve our goal of gauging how much accurate, factual knowledge staff possessed related to traits and conditions that contribute to participation planning challenges, and also did not anticipate having such limitations in understanding task demands of live theater. As a result, relationships between community partners and venues should be conceptualized as a process of ongoing collaborations that occur over time, as seen in Figure 2.

Limitations

We explored possibilities and outcomes of a collaboration between occupational therapy faculty and students with theater staff that were highly interested in participation planning. Some limitations prevent the study from having generalizable results. Owing to its exploratory design, results were derived from a small number of participants and one setting. Additionally, because the theater had participation-planned programs in place, results are likely to be different than those from venues with no participation planning.

The researchers also came to this study with inherent biases. Notably, the researchers had strong biases toward including evidence-based sensory calming elements in a sensory haven. The staff elected not to use these strategies, stating concerns a sensory haven could prove to be a distraction and diversion instead of a support. As a result, no supports were utilized during performances.

Recommendations for Future Research

Research is recommended to determine replicable ways to research and understand sustainable community partnerships with shared goals of access and planning for children with participation challenges. Collecting more data representing a variety of viewpoints would

serve to deepen understandings and create a more comprehensive picture of community access planning. School personnel, occupational and physical therapists, general and special education teachers, and students could clarify challenges fieldtrips entail. Family experiences could be more fully understood by learning from family members themselves.

Considerations for future collaborations should include pragmatics of data collection and analysis. In this case, data was organized by combining face-to-face and online surveys. Although responses were aggregated, it was clear face-to-face surveys yielded richer information than online surveys, suggesting that as this type of research evolves, much can be learned about the complex topic of participation planning from venues both large and small.

Conclusion

This research described the evolution of staff confidence and knowledge as a result of collaboration between occupational therapy and live community, and that it did have a positive impact on their participation planning for visitors with special needs. Through partnerships, outside experts can help cultural arts venues implement evolving changes to their physical structures, programming and staff skills. Occupational therapists offer unique expertise in collaborative efforts, using holistic, functional approaches to planning and implementing special events, modeling strategies to support communication, healthy behaviors, and self-regulation. As requested, occupational therapists can also train designated staff members to serve as the in-house experts on participation planning.

Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

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