



Theatre and Therapy Project: An Interprofessional Exploratory Pilot Study

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Abstract

The Theatre and Therapy Project was an interprofessional exploratory pilot study designed to examine the efficacy of theatre as a therapeutic intervention context for adolescents and young adults with intellectual disabilities and autism, all of whom had moderate to severe communication impairments. Undergraduate and graduate students from Departments of Communication Sciences and Disorders and Theatre and Dance were recruited, as well as eight client participants ranging in age from late teens to mid-twenties. The study used a pretest-posttest design using specific subtests related to communication, self-direction, and social domains from the ABAS-3 Adaptive Behavior Assessment System, Third Edition, as well as a survey measuring the self-confidence of client participants. Activity-based intervention and video modeling were used to teach targeted speech, language, and social goals. This article describes implementation of this innovative program aimed at improving the communication and self-confidence of client participants. The perspectives of those who were involved in the Project are shared: a parent of a young adult with a developmental disability; students who were involved with providing intervention and collecting data; faculty members and practitioners from the Department of Communication Sciences and Disorders who supervised the speech-language pathology students; and a faculty member and practitioner from the Department of Theatre and Dance who supervised and worked with the theatre students. And finally, the challenges encountered and perceived benefits of this innovative therapeutic program are discussed.

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Mark greeted Andrea as she entered the community center and enthusiastically shook her hand. Andrea's daughter, Rosie, and Mark had attended the same elementary and high schools. After the two graduated from high school, Andrea had run into Mark around town every now and then, but had not had an extended conversation with him for several years. With a beaming smile, Mark said, "Welcome. Come in. There are refreshments in this room." With the demeanor of someone who is anticipating a celebratory event, he led Andrea by the arm to a table with colorful platters of fruits, cheeses, and desserts. He motioned with the open palm of his hand over the platters of food and said, "Help yourself!" Andrea thanked him and asked if he remembered that she was Rosie's mom. He replied with confidence, "Yes, I remember." Just then, the theatre coach poked her head around the corner and said, "Mark, it's time to get into your costume!" With that, he quickly exited the room. Other invited guests were gathered around the table with the refreshments, while others had already taken a seat in the room where the performance would take place. Soon, the talking subsided and Mark's mother gave the introduction, "Today, Mark will be performing selected scenes from the Disney movie, Beauty and the Beast." And so the performance began...

Mark is a friendly, creative, and good-natured 25 year-old young man who has a developmental disability. When Mark graduated from high school, he went on to attend a college program for students who have diverse abilities. Prevalence figures indicate that approximately 1.5% of adults or 4.6 million individuals in the U.S. have developmental disabilities [1]. Developmental disabilities are severe and chronic, originate at birth or during childhood, are expected to

continue indefinitely, and substantially restrict an individual's functioning in several major life activities. Adolescents and adults with developmental disabilities, such as autism and intellectual disabilities, often experience associated communication disorders. Additionally, individuals with intellectual disabilities experience significant limitations in both intellectual functioning and in adaptive behavior, which affect a variety of everyday social and practical skills. Individuals with autism often experience significant social, communication and behavioral challenges.

Parents, teachers, and speech-language pathologists involved with adolescents and young adults who have developmental disabilities are aware of the limited availability of speech and language services and specialist support with this age group [2]. As a result of implementation of the Individuals with Disabilities Education Act (IDEA) [3], services for individuals with developmental disabilities, like Mark, occur during elementary and secondary school, as well as during the transition period to adulthood from 18 years to 21 years. Beyond 21 years of age, parents of those with developmental disabilities are responsible for seeking out and/or paying for therapy sessions (e.g., speech-language, occupational, physical, etc.), structured social activities, and work experiences for their sons and daughters.

Soon after the performance at the community center, Andrea and Karen, Mark's mother, agreed to meet for lunch. Andrea shared with Karen the remarkable difference she had seen in Mark's communication and social skills, as well as in his overall level of confidence. Andrea remarked that in the past when she had tried to communicate with Mark, he seemed to divert his eyes, spoke very softly, and sometimes, appeared to be mumbling to himself. This was not so on the night of the performance. Mark had made direct eye

contact with Andrea, his articulation was clear and free of hesitations and repetitions, and he appeared confident.

The Theatre and Therapy Project began soon after Andrea's meeting with Karen. Karen explained that after her son, Mark, had graduated from a college program for students with diverse abilities, he had worked with a drama coach, and subsequently, both she and her husband noticed a significant improvement in his articulation and overall communication skills, as well as in his self-confidence. As a speech-language pathologist, Andrea understood the significance of Mark's progress. Andrea and Karen talked about the lack of local services for adolescents and young adults with developmental disabilities and about the possibility of starting a new program in which targeted goals (e.g., speech, language, communication, social, etc.) could be embedded into activities associated with theatrical productions and how this could provide a supportive and motivating environment for adolescents and young adults to learn.

The purpose of this article is threefold. First, we describe an interprofessional exploratory pilot study aimed at improving the speech, language, communication, and social skills, as well as the self-confidence of client participants. Second, we share the perspectives of those who were involved in the project: a parent of a young adult with a developmental disability; students who were involved with providing intervention and collecting data; faculty members and practitioners from the Department of Communication Sciences and Disorders who supervised the speech-language pathology students; and a faculty member and practitioner from the Department of Theatre and Dance who supervised and worked with the theatre students. And finally, we discuss perceived benefits of this innovative therapeutic program, the challenges we encountered, and the three ethical principles that guided us in our work with individuals with disabilities. These principles included: "Dignity – Treating individuals with disabilities and their families with respect and esteem; Family as foundation – Recognizing families as the core unit of society and typically the first, most enduring, and most important entity to which individuals with disabilities relate; and Community – Being part of a greater social whole and experiencing full citizenship of society at all levels [4]."

The Theatre and Therapy Project

The Theatre and Therapy Project was loosely modeled after a pilot investigation that evaluated a theatrical intervention program for children with autism spectrum disorders (ASD) [5]. In that project, the goal was to improve socioemotional functioning and reduce stress in school-age children with ASD. The eight client participants in that project ranged in age from 6 to 17 years and were paired with typically developing peers who served as expert models. The results showed the potential utility of embedding intervention in a theatrical production, as well as using behavioral science methods, to improve the socioemotional functioning in children with ASD.

The Theatre and Therapy Project was an interprofessional exploratory pilot study designed to examine the efficacy of theatre as a therapeutic intervention for adolescents and young adults with intellectual disabilities and autism, all of whom had moderate to severe communication impairments. To implement the Theatre and Therapy Project, 16 students were recruited from the Departments of Communication Sciences and Disorders and Theatre and Dance, as well as eight client participants who ranged in age from late teens to mid-twenties. These participants were by no means homogeneous; their abilities and developmental challenges varied to such an extent

that our team of students from both Departments were required to tailor their approaches, contour exercises, and choose materials based on each participant's unique needs and learning goals. This study used a pretest–posttest design using specific subtests related to communication, self-direction, and social domains from the ABAS-3 Adaptive Behavior Assessment System, Third Edition [6], as well as a survey measuring the self-confidence of participants. Activity-based intervention and video modeling were used to teach targeted speech, language, and social goals.

What sets activity-based intervention apart from other approaches is the manner in which children's intervention goals and objectives are addressed. Unlike other pedagogical approaches which utilize teacher directed lessons, activity-based intervention uses daily routines and activities as vehicles for explicit teaching, practice, and feedback. This conceptual position and its practical application are based in part on situated cognitive learning theory [7,8]. Situated cognitive theory suggests that learning is enhanced when intervention content is embedded in authentic, real-life activities or situations rather than under conditions that are not meaningful to learners.

Video modeling is a technique in which a learner watches a video of someone demonstrating a targeted skill and then imitates the behavior. In video self-modeling, a learner is videotaped performing behaviors and then watches those videos alone or with others. A recent meta-analysis of video modeling and video self-modeling interventions for children and adolescents with autism reported that both techniques can be effective intervention strategies for improving behavioral functioning, social-communication skills, and functional skills, as well as encouraging motivation and self-confidence [9].

Perspectives of those Involved in the Project

The next four sections present the perspectives of those who were involved in the Project. Interviews were conducted in order to document the unique perspectives of all involved.

Perspectives of a parent: Karen

As parents, Mark's father and I routinely took advantage of every infant/child/school service and activity in which Mark showed any interest. Our community was situated in a rural area, thus social, educational, and employment opportunities for adults with intellectual disabilities were few. So when Mark graduated from the university program, we knew that we needed to be creative in order to maintain a positive trajectory for his cognitive and socioemotional growth.

One of the first pathways we explored was the continuation of speech therapy through the university. Although we were eligible clients, Mark said that "speech was for kids" and adamantly refused to return. As a charismatic young adult, Mark enjoyed the attention of the attractive young women who provided speech therapy. So we sought private services from a student who was studying to become a speech-language pathologist; however, the state licensing law disallowed students to practice prior to obtaining a degree. Mark always loved stories and had enjoyed drama in elementary school, so Mark's father suggested we try to find a theatre student. He reasoned that a theater student would be able to capitalize on Mark's love of stories and drama, while simultaneously working on voice projection, articulation, eye contact, and other goals that we had set for speech therapy.

Through the university we identified a recent theatre graduate, Tandy. Not only was Tandy a very talented actor, she had enjoyed

working with individuals with disabilities during her degree program. We told her that our current primary goals for Mark's speech and language were articulation of soft and hard /th/ sounds; and the distinction between /v/ and /f/ sounds; the /l/, /r/, and /w/ sounds; and the /b/ and /p/ sounds. Tandy capitalized on Mark's current passion for *Peter Pan* and immediately found three scenes in the Disney movie that employed these sounds. During the next nine months, Tandy met with Mark twice a week to rehearse.

Suddenly speech therapy became the highlight of Mark's week. As opposed to coming home after therapy and refusing to talk about it, he returned from each session happy, enthusiastic, and, without prompting, willing to share what he was working on in each session. All week long he frequently and spontaneously practiced lines from the scenes, such as this one in which he played Captain Hook:

SMEE: I thought you liked your hook! For combing your hair. And scratching.

CAPTAIN HOOK: 'Tis true: if I were a mother, I'd pray to have my children born with this (*HOOK*) instead of this (*HAND*). Oh, but *Smee!* He threw my hand into the crocodile's maw! And the beast has been licking his lips for the rest of me ever since!

SMEE: But luckily, the croc also swallowed a clock, which gives us the tick-tock-tick-tock so's we can get away before he reaches you. Why I can almost hear it now.

CAPTAIN HOOK: Oh no. The brute is here! Save me, *Smee!* Save me!!!

After Mark had learned most of his lines, Tandy introduced blocking (i.e., positioning and movement of characters to tell the story) and gestures. After eight months, Mark and Tandy performed three scenes from *Peter Pan* at the local community center. Three months later, they presented again, performing a different scene from *Peter Pan* and two scenes from Disney's *Beauty and the Beast*. Mark's father and I—as well as many in the audience—noticed Mark's increase in self-confidence as well as his enjoyment of acting and improvisation.

While it was very satisfying to see how happy and self-confident this experience made Mark, it was even more gratifying to see how Mark was genuinely interested in improving his speech. He monitored his own speech in ordinary conversation; he frequently and spontaneously caught his own mispronunciations and repeated over-exaggerations of the difficult consonants in words such as: "love," "rascal," and "ever." Each time he would look at us with wide eyes and a proud grin to make sure that we noticed how hard he was working.

Another very positive and unintended benefit of his experience was that Mark began reading voraciously. Mark read at a second to third grade level, and even with access to the resources of a reading clinic, during high school it became increasingly difficult to identify books that enticed him to read on his own. Thus he totally lost interest in reading. However, Mark began reading again. He read the *Peter Pan* script—not just the parts he was rehearsing, but all characters' lines in the full Disney movie script. Later he requested the script of Disney's *Beauty and the Beast*. He had six scripts that he read over and over. Most times Mark studied for 3 hours at a time; however, on one day, he read for 11 hours, stopping only for meals!

Mark's father and I were in awe. From this experience with Tandy, Mark continued his development as a young adult in three significant ways—he found a new source of joy and enthusiasm, he made significant progress on his speech and language, and he rekindled his

interest in reading. Not surprisingly, Mark was the first to enroll in the Theatre and Therapy Project. When Project staff visited him in our home to administer pretest assessment measures, he enthusiastically displayed the script that he had already chosen and even read through some of his lines. Throughout this Project, Mark continued to show improvement on his speech and language skills, as well as improvement in his reading fluency and comprehension.

Experiences and perspectives of students

Before this Project began, students attended ten hours of instruction, delivered once a week for two hours over a five-week period on the following topics: 1) the purpose and content of the ABAS-3 Adaptive Behavior Assessment System, Third Edition; 2) developmental disabilities, including autism and intellectual disabilities, 3) intervention approaches, specifically activity-based intervention and video modeling, 4) theatre warm-up exercises, movement, and vocal technique; and 5) acting exercises, performance, and textwork. The training was delivered in a part lecture and part self-study format. Students completed pretests before each lecture, completed an associated self-study module, and then took a posttest. This quote summarized one student's thoughts about the instructional sessions.

"Even though training was thorough, I felt I was able to get the most experience working directly with the participants. However, the training sessions that talked about data collection, goals, and interventions were very helpful. If I did not have this training it would have been more difficult for me to help with this study."

There is some research that suggests that students who receive instruction delivered as only coursework, without the benefit of having hands-on clinical placement experience, are not as confident in their ability to communicate and work with clients who have communication impairments [10]. During instructional sessions, many students expressed a lack of confidence and knowledge about how to work with client participants who had developmental disabilities. This student struggled with gaining confidence in her abilities.

"Once the Theatre and Therapy Project began, it took me awhile to get into a routine, but once I was able to adapt to the schedule and knew what I wanted to do during rehearsal time, I felt more comfortable and confident working with participants who have developmental disabilities. I feel that if I had known specifically what I wanted to do with participants from the start there could have been more improvement during the first two weeks."

Students who were involved in the Project worked in triads consisting of one client participant, one theatre student, and one speech-language pathology student. The theatre student served as an acting coach, modeling and demonstrating acting technique, while the speech-language pathology student modeled how to provide therapy on targeted goals. Working together, they embedded the client participant's targeted goals into theatrical rehearsal activities. This quote from one of the students provided us with insight into how the triads functioned.

"There is something very special about the triad relationship. The triad allows the theater student, the speech-language pathology student, and the participant to all be equal members of an inclusive group, as we all read lines for our parts (not just the participant). Every session builds our team camaraderie, and we spend much of the two hours laughing together. Not only has our triad grown close, but we

interact with other triads, which provides an excellent platform for social interaction with the participants.”

Before the Project began, we hypothesized that embedding therapy into activities associated with theatrical rehearsals, and use of video modeling, could be used to improve the developmental skills of participants: pragmatics and social skills (e.g., turn taking, eye contact); semantic skills (e.g., vocabulary); syntax and morphology (e.g., sentence word order, length and complexity); articulation and phonological skills (e.g., articulation errors, phonological rules); reading comprehension (e.g., story recall); cognitive skills (e.g., auditory verbal memory, sequencing); and voicing (e.g., volume, intonation, and projection). This quote from one student captured the changes she witnessed in one of the client participants.

“When our triad is gathered, casually practicing lines, our participant’s vocal quality is strained, with visual hypertension of his neck muscles. He has shown difficulty achieving the expected volume for his “shouting” lines, and informed us that he only feels comfortable being loud when he is by himself. Nevertheless, during rehearsal, we hear a volume that improves at every performance. His strained vocal quality diminishes by observable and audible degrees when he is “on stage.” After our last rehearsal, our participant told us that his lungs feel stretched because he is not used to reaching that level of volume. For us, this is huge.”

In addition to the speech and language difficulties our client participants experienced, individuals with developmental disabilities often have reduced communicative opportunities with others, which in turn can negatively impact identity formation, and self-confidence. This student commented on the positive changes she observed in one of the client participants.

“Last week I witnessed one of the participants who at the start was constantly hunched over, and silently staring at the ground standing tall and straight, looking into his friend’s eyes while standing in a circle, and he spoke loudly in front of the entire group. Most importantly, he was smiling the entire time. Many of the other participants are no longer shy, but excited to volunteer as well. The dignity and inclusion that the young adults in this study are being shown by the triads and each other is beautiful; this alone makes the entire experience worthwhile. The fact that in addition to this, I am witnessing the augmentation of self-confidence, articulation, voice quality, improvisation, and volume skills on top of these social gains, is nothing short of amazing to me. These observations are the reason why I believe this study to be a great success.”

In addition to the observed changes in one participant’s level of engagement with others during the Project, this quote from a student provided information about how his behavior and demeanor also changed at home.

“While some of these participants have had experience with theater classes in their local schools, the individualized attention within this Project provides for them something unique and special. One of the participants, Jacob, who is very intelligent and high functioning, appeared to feel detached from the other participants in the group at the start of the Project; he wanted little to do with his peers. His transformation in this area has been remarkable. During our last session together, for example, Jacob brought a script for *Snow White* (the favorite film of another participant, Tom) and acted out a lively, and humorous monologue for Tom, while they both laughed and beamed. This big brother/little brother type relationship was not expected coming from Jacob, or included in any of his goals;

nevertheless, he has improved in this area drastically. His mother told us that his behavior and demeanor at home has changed as well. She said he has been running from place to place, due to his overall excitement about the sessions. She said this behavior is completely out of character for him. He works on new projects at home and his creativity is flourishing; he brings in new costumes and drawings every week to share with us. His self-confidence has shot up, and he is not the only one.”

The change process has been studied extensively. The Concerns Based Adoption Model is one of the most cited models of change for teachers [11-13]. This model provided us with a framework for understanding how teachers and clinicians progress through stages, beginning with how to work through the challenges associated with grasping a new program to a more advanced level, where expertise in using the program is achieved. In this Project, after students gained more confidence in their own abilities and teaching practices became more routine, they had more time to focus on how the client participants were learning and what might work even better. One student offered suggestions for changes she believed would enhance the learning experience for our participants and the other students.

“If therapy was held multiple times a week for shorter periods I think my participants would have had better outcomes, since they seemed to fatigue towards the end. I also felt, as well as other students felt, tired at the end of the sessions, which could have impacted the outcomes. That being said, we did make modifications to the schedule by putting active activities at the end (i.e., improvisation activities the whole group participated in, name games, etc.). This made the participants more engaged. However, all of us had fun during therapy every day. I laughed with participants at least once every session. Plus, moving around kept both students and participants engaged. Because of this, all of the participants seemed excited to be at theatre therapy.”

Participants were videotaped performing their scenes, and periodically, before and after video self-modeling clips were shown to the client participants, their families, the students, and faculty members who were involved in the Project. One student commented on this process and the progress she observed in the client participants.

“Today we invited the families and are showing the before and after video clips. Comparing progress from the start of Theatre and Therapy Project to the end I feel that participants were more confident and talkative. Many of them also improved significantly on their goals. Some of the goals I felt were best suited for participants seemed to generalize into our social time outside of rehearsals. One parent commented that his son seems more self-confident, while another parent noted that her son’s reading skills seem to have improved. Overall, this has been an exciting experience and I feel like the participants showed improvement throughout.”

The participation of students from the Department of Communication Sciences and Disorders differed from any of their previous course work, volunteer, and practicum/field experiences. One student highlighted the differences she observed when embedding intervention on targeted goals within the context of theatrical rehearsals..

“After working with many different clinicians over the years, I have also had the opportunity to act as an observer, as I witnessed and compared the effectiveness of particular methods and therapy approaches with different children and adults. During my years as a nanny for an infant with Down syndrome, I observed and assisted with weekly therapy sessions (i.e., speech, occupational, aquatic, and

physical therapies, as well as early activity-based model of intervention) for over 2 hours a week, for 3 consecutive years. I say with emphasis, that I have never witnessed such rapid social improvement and goal acquisition, as I have with the embedded intervention in this pilot research study.”

The students from the Department of Theatre and Dance were themselves in the process of acquiring more skills in their chosen discipline. Some had stage experience; some sang; all were deeply invested in bringing their own passion and experience to others. Each of them had experience with theatre’s potential for transformation. Each had accessed, in different degrees and in ways unique to their own personal contexts and histories, the beauty, profundity, and transformative power of theatre, as this student noted.

“I knew what it could do—and I was interested in helping others realize that our discipline isn’t just fun and games; it can provide an unorthodox way for people with developmental disabilities to move beyond the restrictions they deal with daily. I knew all the science, but I really wanted to learn how to use pedagogy in practice, with people with disabilities, and to work with them in a way that addresses their modes of thinking.”

Throughout the Project, students administered weekly acquisition treatment data probes. Data was consistently recorded and considered important, however, less tangible signs were observed that our students were helping to transform our participants’ lives. Perhaps this student’s comment said it best.

“I still prefer the qualitative over the quantitative. I don’t know how it fits the rubric we’re using, and I don’t know if we filled all the boxes and hit all the marks, but I do know we were really excited when our participant said his line really well. We were thrilled. He was too.”

Perspectives of speech-language pathology practitioners

One challenge for those of us who prepare students to become speech-language pathologists and teachers is how to bridge the gap between the theory and research we espouse in the classroom and practice. Despite strong evidence for the long-term impact of speech, language and communication impairment into adolescence and adulthood [14,15], there is a paucity of resources available to these individuals once they transition out of school-based services. In contrast to the traditional service delivery models often found in schools, this Project used an activity-based model of intervention first introduced to students in the classroom, then used by them to explicitly teach targeted therapy goals to our client participants in an authentic therapy context [16].

In traditional approaches to intervention, speech-language pathologists often work with clients on discrete skills such as articulation, receptive/expressive language, pragmatics, etc., in a highly structured, clinician-directed therapeutic context. For example, a session may include drill-play activities in which the speech-language pathologist prompts the client to produce targeted language structures, speech sounds, or pragmatic skills in a repetitive, decontextualized manner. For adolescents and young adults with developmental disabilities, this approach may be problematic for a variety of reasons. First, the adolescent student may not be as engaged in decontextualized therapy activities and may decide not to participate. Second, adolescent students spend a significant number of hours each day in a classroom context. In such settings, they are focused on meeting learning goals and often may participate in drill-based activities. For those with learning difficulties, this can be especially

problematic because much of their instruction may be delivered in a one-on-one interaction format with a teaching assistant or related service personnel. Traditional speech-language pathology services that resemble school-based drill activities may seem mundane, unimportant, frustrating, and predictable to adolescent students. Finally, as adolescents strive to become independent in their learning, traditional models of service delivery with the clinician as an authoritative figure does not always foster independent learning or allow them to assume responsibility for their goals and aspirations.

Activity based intervention focuses on embedding therapy into functional activities that are motivating and meaningful for the individual. An activity based approach includes a) functional goals that can generalize across environments, b) planned activities that serve as the context for embedded intervention, c) meaningful consequences and feedback in planned activities, d) a variety of opportunities for direct instruction to address planned outcomes [17]. Thus, this naturalistic approach to intervention uses an individual’s interests and preferred activities to develop functional skills in authentic learning experiences.

The students who volunteered to participate in this Project were interested in gaining knowledge and skills in working with adolescent and young adults who had developmental disabilities in an interprofessional context. First, students and faculty worked with the client participants and their caregivers to establish meaningful goals that could be targeted in the context of theatrical rehearsals. For example, targeted goals included reciprocity in conversation, articulation, and fluency of speech. These functional goals were relevant to each client participant’s theatre performance, and also to his communicative competence outside of the context of the Project.

Next, students and faculty planned activities to serve as the context for targeting the identified goals. This included careful selection of theatrical scenes or songs that a) were preferred and motivating to each participant and b) provided multiple opportunities for embedded instruction and practice toward each participant’s goals. For example, Mark selected a scene from the movie, *101 Dalmatians*, in which he played the part of Horace, one of Cruella DeVill’s sidekicks. In order to address his communication goals in this activity, the students implemented various instructional techniques that focused on his articulation and intelligibility. This “behind the scenes” planning by students and their supervisors ensured a systematic approach to intervention that provided many meaningful opportunities to practice articulation goals in an activity in which Mark was motivated to participate.

During weekly rehearsals, client participants and students worked alongside one another completing theatre warm-up exercises, rehearsing lines, and developing props and staging. The students provided individualized, performance-based feedback to the participants relative to their goals. Feedback was provided via visual supports (e.g., scripts), verbally, or through video self-modeling. In video self-modeling, client participants viewed a video recording of themselves performing a scene with the students and received strength-based feedback (e.g., “It was great how you looked at the other character when you were talking to him. That way the audience knows that you are talking to him in this scene.”), in addition to reflective prompts (e.g., “Is there anything you want to do differently next time?”), or suggestions (e.g., “Let’s try that scene again using slow speech.”).

Students used a variety of evidence-based instructional strategies to embed opportunities for direct instruction and practice into rehearsal activities. In addition to video modeling, strategies included in-vivo (in-person) modeling, prompting, and visual supports. For example, a visual schedule was used to help client participants anticipate and participate in scheduled activities during each two-hour rehearsal. One client benefited from illustrations that the students drew to help him remember his lines and the blocking of the scene. Another student used explicit teaching to share information with a participant about optimal voice production and breath support for louder, 'angry character' scenes.

The rehearsal of scripts provided students and client participants with a recurring medium through which to work on goals and thus, document progress. Mark's focus on articulating consonant sounds in an accurate and intelligible manner improved not only when reciting the script itself, but also during social theatre activities (e.g., warm-up exercises, conversation at snack time) indicating how embedding goals in meaningful contexts may facilitate generalization of communication skills. The same was true for pragmatic and social goals that incorporated eye-contact and voice projection. In addition to implementing activity-based intervention in an authentic and functional context, and using strategies such as video-modelling to facilitate the participants' progress towards their goals, students were also responsible for collecting acquisition treatment data probes prior to the rehearsal sessions. Project staff collected generalization data probes during the sessions.

From a speech-language pathology practitioner perspective, theatre provided an ideal medium through which intervention was delivered. Individualized evidence-based strategies were easily integrated as client participants worked on rehearsing their chosen scripts for the final performance, and the authenticity with which this occurred generalized to other Project activities (e.g., snack and break times).

From a pedagogical perspective, exposure to functioning as part of an interprofessional team with mutual respect for other professions has been shown to positively carry over into students' professional careers. Interprofessional education has helped students to develop skills in leadership, teamwork, and the ability identify person-centered communication goals [18].

Finally, from a clinical perspective, participation in this Project helped students transfer didactic learning to a therapy setting, build confidence in themselves, and promote awareness of the need for collaborative skills, linking theory to practice. This enhanced confidence and increased participation is what speech-language pathologists view as successful treatment. Along with confidence building, the students in this Project reported an increased awareness of their role as a teacher. Involvement in programs such as this one allowed individuals with developmental disabilities to work on and meet communicative goals that may facilitate vocational and community integration, thus enhancing quality of life for these individuals and their families.

Perspectives of a theatre practitioner

The premise was simple: the students would introduce our client participants to theatrical exercises, work with them on scenes of their own choosing, and arrange for them to perform for a select audience at the end of a 20-week period. The idea driving the premise—that theatre would help the participants improve their speech, language, cognitive, and social skills—was almost a truism among the students

who had been recruited from the Department of Theatre and Dance to work in this Project. They already trusted theatre's efficacy in this regard, had all experienced theatre's educational potency in their own unique encounters with the art form, usually as actors.

From a theatre perspective, a person becomes, if only a little bit, that which he or she performs. This was the secret hope subtending the entire Project, beyond the drills for better plosives and straighter posture, that the client participants would—by performing characters who spoke clearly, stood erect and confident, engaged with others in the scenes—adopt if even by small degrees similar characteristics in their own lives. Our desire was to offer them a different way toward developing stronger skills besides the usual pedagogical exercises and flash cards, to introduce them to the power of mimesis and its long-term effects on behavior.

Aristotle spoke at great length about the theatre of his time, leaving in his *The Poetics* an unparalleled chronicle of how theatre works, prescient words about ways an audience may be moved to fear and pity—Aristotle's term was catharsis—or in more modern terminology, how watching a play may bring us all to a place of greater empathy. Aristotle did not use this term, but his lengthy explanation of catharsis left little doubt as to what he thought theatre was capable of producing in its audience. And theatre can change its practitioners as well; if watching can transform you, imagine what doing may cause to occur? Aristotle reminds us that we learn through imitation, an idea theatre people have long held as unassailable. The interprofessional Project helped put this maxim to the test.

After a series of vetting procedures, over a half dozen theatre students were recruited who were eager to work with the client participants in the Project. Each week, the theatre students immersed our participants in the dramatic arts. During the first sessions, we devoted ourselves to warm-ups—stretching limbs, shaking out, blowing through lips, opening and closing our mouths outrageously—and gave the participants exercises to help them learn their lines, explore characterization, and remember basic blocking. Students learned about the client participants' interests and their favorite movies and characters. They adapted (sometimes wrote) scripts that incorporated these characters into little scenes. One participant loved the Disney film, *Snow White and the Seven Dwarfs*, and in particular the character of Grumpy; the students culled a scene and wrote out the lines for the participant to learn and rehearse. Another especially motivated client participant came with a scene from Disney's *Peter Pan* practically memorized, and even created some props and costume pieces himself.

However, not all the client participants were as prepared to step into the process of making theatre. In fact, the range of abilities proved at first daunting. We soon learned during warm-ups and exercises that a couple participants were unable to raise both arms above their heads or control their limbs with precision; others balked at excessive noise and sequestered themselves from the larger group if the activities grew too loud or the movement too frenetic. Some client participants were so shy that initially they could not comfortably join in any group activities; some, when asked to respond to an improvisational prompt, such as, "What sound would you like to shout to the center of the room?" would shake their heads "no" and turn away. Some, after a few moments, would begin to fidget and ask when it was time to go home. The Theatre students, while quickly growing fond of all the participants, began to wonder: Were they reaching any of them? Were they actually helping, or were they boring, annoying, or even tormenting them? Were the Project's notions regarding theatre's

therapeutic potential, its ability to reach, to connect, to transform—were these notions wrong? Or just insufficiently nuanced?

But the students accepted that these were merely the first sessions. Meanwhile, they dutifully returned every Thursday for the two-hour session, uncertain if their efforts were having the desired effect on the client participants. Each week they engaged everyone in group warm-ups. They talked about characters the participants had decided to play (e.g., Grumpy, Mr. Darling, Shrek, Angry Bird, Prince Charming, even Stephen Sondheim's Mrs. Lovett) and worked on lines and blocking.

And nearly imperceptibly, something began to change. One client participant, who held his head so far down that his head hung preternaturally below his shoulders, and no one was able to see his face, in later sessions arrived with his head up, his lively and penetrating eyes gazing directly into ours. Another, who never participated in warm-ups or improvisation exercises, offered an unprompted improvisation suggestion, which the group enthusiastically followed. One young man, who ordinarily exhibited disfluencies and other non-lexical utterances such as "huh," "er," and "um," could speak fluently for several minutes (especially in the scene being rehearsed). By the end of the Project, the participants greeted everyone in the program easily and appeared to enjoy one another's company.

Summary: Challenges and Benefits

This section outlines the challenges we encountered and the perceived benefits of this innovative therapeutic program. Interprofessional education focused on person-centered care is an emerging trend in higher education and continues to be slow to develop. Although interprofessional education and collaboration are not new concepts, partnering the disciplines of speech-language pathology and theater education is certainly a unique approach. Challenges to implementation of the Project included logistical issues related to scheduling, and initially on the part of students, a hesitancy to step out of their comfort zones and perceived professional roles. All students and faculty were pressed for time as each took on this Project in addition to other full-time commitments. Students in the Department of Communication Sciences and Disorders earned clinical clock hours for their work with the client participants, but there was lack of a tangible reward for students in the Department of Theatre and Dance. These challenges were overcome, however, it should be noted that flexibility, dedication, and determination were certainly required for this "voluntary" experience.

In regards to the client participants, attrition was a limitation of this Project. Two of the original eight participants dropped out midway through the Project. One participant's mother, who lived in a nearby town, was unable to coordinate release time from her daughter's high school, and therefore her daughter was unable to arrive to the Project on time. Another family decided that the Project did not fit their son's learning needs. It was decided that he would benefit from one-on-one therapy sessions. Scheduling and transportation were problematic for some who would have liked to participate.

Despite the challenges, many benefits were observed using this innovative therapeutic approach. From the faculty perspective, we rediscovered that we can learn much more from our students than they likely learn from us—that is, if we remember to pay proper attention. Our time with the Project is a case in point. We came to our afternoon sessions a swirl in our own busyness, only to walk into a room in which young people, client participants and students, were sitting together,

leaning into their new friends, listening and reacting with eternal patience and solicitousness.

The students also experienced unanticipated benefits. For example, one student mentioned that he was surprised at two things that have come out of his experience with this Project. First, he confessed he was learning more about himself, as a teacher and performer, than he had anticipated—a reminder that theatre has a way of making everyone better (drama started, after all, as a means of helping a community come together in a ceremony of healing). He also offhandedly mentioned that he thought the Project would work even better if the client participants met more than once a week. He was not necessarily referring to needing more practice. But he was speaking of something else. He had remembered that, at the end of the first ten sessions, after a three week hiatus for everyone, the participants came back having fallen back into pre-Project habits. They were less social. A drop in eye contact. The head held below the shoulders again. The disfluencies returned. The student remarked, "I think they just do better when they're with everybody."

Of course that student's observation was correct. The client participants improved in ways they evidently did not with flashcards and non-theatrical teaching tools. While pre- and post-test data showed that participants made modest gains in communication, self-direction, and social skills, we nonetheless believe that much of their improvement may have originated from the power of imitation, as was anticipated by faculty beginning the program. Learning to say words as part of a script, working to articulate and speak more loudly and clearly in order to make an artistic product, collaborating with others in service to a project that can incur the respect and admiration (and applause) of an audience exert a strong motivation to do well.

The students' words reveal the most significant benefit of the weekly sessions. The client participants—young people who have entered the world with developmental and communication challenges that have interfered with their ability to fully integrate into society, to live fully as members of a group where they are treated with respect and dignity—were given community. It is this community forged together week by week—more than the improvements in articulation, posture, volume—that will prove the most valuable for participants and their families, students, and faculty all. This quote from the faculty member who supervised the Theatre students, and who had never before worked with individuals, who have developmental disabilities, speaks to this.

"The participant who has been working on the role of Grumpy (I have tried to unravel the appeal of this character for him, since he has one of the gentlest, kindest personalities I have ever encountered), has since the first session behaved coolly toward me, rarely looking at me at all, engaging in the briefest snippets of chit-chat, physically closing in, even moving away whenever I have tried to engage him in conversation. Last week we tested a new group improvisation exercise, which got everyone—participants, students and teachers all—in a circle playing together. As we gathered around, sharing in our collective creativity, I felt something on my left side. I looked over: Grumpy was holding my hand."

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References

1. Fox MH, Bonardi A, Krahn GL (2015) Expanding public health surveillance for people with intellectual and developmental disabilities in the United States. *Int Rev Res Dev Disabil* 48: 73-114.
2. Joffe V (2005) What can speech and language therapy offer adolescents with severe language impairments? *Afasic News*, Spring/Summer: 6-7.
3. Individuals with Disabilities Education Act, 20 U.S.C. § 1400 (2004).
4. Turnbull A (2016) Keeping IDEA's promise for equality of opportunity, independent living, full participation, and economic self-sufficiency: Embracing the full lifespan. Paper presented at the North Carolina CEC 29th Annual Conference, Pinehurst, NC.
5. Corbett B, Gunther J, Comins D, Price J, Ryan N, et al. (2011) Brief Report: Theatre as Therapy for Children with Autism Spectrum Disorder. *J Autism Dev Disord* 41: 505-511.
6. Harrison PL, Oakland T (2015) *Adaptive Behavior Assessment System* (3rd edn). Torrance, CA: Western Psychological Services.
7. Brown JS, Collins A, & Duguid P (1989) Situated cognition and the culture of learning. *Educational Researcher* 18: 32-42.
8. Putnam R, Borko H (2000) What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher* 29: 4-15.
9. Bellini S, Akullian J (2007) A meta-analysis of video modeling and video self-modeling interventions for children and adolescents with autism spectrum disorder. *Exceptional Children* 73: 264-287.
10. Finch E, Fleming J, Brown K, Lethlean J (2013) The confidence of speech-language pathology students regarding communicating with people with aphasia. *BMC Medical Education* 13: 1-8.
11. Hord SM, Rutherford W, Huling-Austin L, Hall GE (1987) *Taking charge of change*. Austin, TX: Southwest Educational Development Laboratory, ASCD.
12. Hord SM, Rutherford WL, Huling L, Hall GE (2006) *Taking charge of change*. Austin, TX: SEDL.
13. Hord SM, Stiegelbauer SM, Hall GE, George AA (2006) *Measuring implementation in schools: Innovation configurations*. Austin TX: SEDL.
14. Clegg J, Hollis C, Mawhood L, Rutter M (2005) Developmental language disorders a follow-up in later adult life. Cognitive, language and psychosocial outcomes. *J Child Psychol Psychiatry* 46:128-149.
15. Conti-Ramsden G, Botting N, Simkin Z, Knox E (2001) Follow-up of children attending infant language units: Outcomes at 11 years of age. *Int J Lang Commun Disord* 36: 207-219.
16. Rule S, Losardo A, Dinnebeil L, Kaiser A, Rowland C (1998) Translating research on naturalistic intervention into practice. *J Ely Interven* 21: 283-293.
17. Macy M (2007) Theory and theory-driven practices of activity-based intervention. *Journal of Early Intensive Behavior Intervention*, 4: 561-585.
18. Lairamore C, George-Paschal L, McCullough K, Grantham M, Head D (2013) A case-based interprofessional education forum increases health students' perceptions of collaboration. *Medical Science Educator* 23: 472-481.