## *Perspective Taking Through Film: Educating Pre-Service and In-Service Teachers About Autism*

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### *Abstract*

When it comes to educating students with autism in the classroom, teachers' perceptions and attitudes toward inclusion are essential. Professional development that enhances perspective taking about autism is powerful if it leads to depth of understanding and action. Instructional media can play a role in raising viewer awareness; unfortunately, there are significant difficulties locating appropriate media concerning autism spectrum disorders (ASD) for developing teacher perspective taking skills. A film was developed for this project that shows a first person perspective of a student with autism in a classroom. Findings from 500 teacher participants on a post-test instrument regarding the film's content show increased perspective taking regarding ASD deficits after the film. Results showed that through this approach, teachers were able to deepen their understanding about the deficit areas. Post-test results and feedback from reflective, post-film discussion show teacher understanding of deficits that may be present in those with ASD.

### *Perspective Taking Through Film: Educating Pre-Service and In-Service Teachers about Autism*

Teachers involved in social relationships base their actions, at least in part, on their understanding of others' perspectives. When it comes to children with disabilities, many pre-service educators have yet to encounter the nature and severity of disabilities and deficits they will work with in the field; subsequently, teachers' understanding of why children engage in certain behaviors can potentially influence their social relationships with their students, such as those with an autism spectrum disorder (ASD). Perspective taking, an ability to perceive someone else's feelings, thinking, motivations, behaviors, and so forth, is a dispositional necessity for teachers who are educating numerous students with diverse learning needs, styles, interests, and abilities. Teachers need to see things from another person's perspective in order to understand and engage their students.

This project was based on the belief that pre-service teachers will benefit from a sensory experience that allows them to dig deeper into their own learning and reflection to better serve a diverse population of learners. The researcher of this project believes media and the use of an instructional case study can support the development of perspective-taking skills within pre-service teachers. However, in the field of special education, it is often difficult to locate engaging, technically accurate media tools that authentically present characteristics of disabilities such as ASD that allow viewers to encounter what a student experiences in a classroom setting. This experience could support teachers developing a better sense of what challenges his or her learners encounter first hand.

While there are some effective media tools available in the areas of learning disabilities, speech/language impairments, and emotional disturbance, the field lacks media resources that address other disability categories classified under the Individuals with Disabilities Act (IDEA). New teachers need to be able to understand their students and film-based case studies and models illustrating characteristics of learners with disabilities can support this skill. Thus, a video simulation of a child with a disability would allow teachers to have an understanding of the inner-workings of the mind of a student living with the challenges encountered in a mainstreamed classroom.

A well-designed video simulation can give a visual and auditory experience of what makes for a positive or negative experience in a classroom learning environment. For example, Iovannone, Dunlap, Huber & Kincaid (2003) identify key characteristics of effective appropriate services for students with autism that will likely include the general education teacher, supportive and structured learning environments, specialized curricula focused on communication and social interaction, integration with typical peers, and systematically carefully planned instruction. Seeing how these elements work together and understanding the rationale for why these are necessary will only be of benefit to the viewer; further, powerful learning can occur in viewing what happens if these elements are not effectively in place. Case study film tools can provide this experience. When it comes to preparing teachers for practice, field experiences are the primary vehicles for developing a sense of self as a teacher; however, not all experiences are created equal and it may take complex simulations to bridge the gaps between educational theory and classroom practice, particularly concerning working with learners with complex educational challenges (Dotger & Smith, 2009). Subsequently, the goal of this project was to deepen an understanding of the needs of a child with ASD in a classroom environment so teachers are more apt to purposefully select appropriate instructional strategies and ensure modifications to meet individual student needs. Another goal of this project was to enhance a required special education course with the inclusion of film-based media designed to promote perspective-taking dispositions concerning low incidence disabilities, specifically ASD. Using the literature on deficit areas in children with autism (social, communication, behavior), the research team created a film depicting deficits related to ASD through an instructional case study specially designed to prepare pre-service teachers to understand the characteristics.

As in other states, Connecticut general educators are often not prepared to meet the needs of students with disabilities such as ASD. For example, Connecticut certification regulations require teacher candidates preparing as general educators to take just one special education course or at least 36 clock hours of training in special education, which may or may not contain critical information relevant to educating a child with an ASD, currently the fastest growing special education eligibility category in the State. As cited in Busby, Ingram, Bowron, Oliver & Lyons (2012), increasing numbers of students on the spectrum are being fully included in the regular education classroom where the regular education teacher serves as the primary teacher. The concern remains that regular educators typically do not have special preparation and may feel ill-equipped to meet the complex, unique needs of a child with autism. Film-based media is a solution.

**Teacher Preparation: Needs of Teachers in Understanding Autism**

The IDEA is clear that addressing the needs of eligible children and youth – in all areas of the suspected or documented disability - should be part of comprehensive (and procedurally compliant) program planning and involve multi-disciplinary teams. Educators, individually and as part of a multi-disciplinary team, are critical team members and should know or be able to determine the needs of students with exceptionalities. For example, in working with students with ASD, they should be aware of characteristics of behavioral and other developmental deficits, such as social reciprocity and interaction, repetitive behaviors, and communication, if they are to partner in individualized program planning. Additionally, they should be familiar with characteristics such as resistance to changes in routine or environment, sensitivity to sensory stimulation, and stereotyped movements may also be observed in varying degrees. According to the Connecticut Guidelines for Educating Children and Youth with Autism Spectrum Disorders (2008), teachers needs to be able to understand the characteristics of ASD; identify the individualized needs of the child and develop a program reflecting needs; recognize strengths and build on these capacities; evaluate evidence-based practices; know when and how to advocate for training; collaborate with other school-based staff on a team; and, ensure accommodations and modifications for their students. Given that the general educator is likely to educate a child with autism in a learning environment with multiple sensory experiences, it is important for him or her to be aware of sensory processing deficits in addition to the triad areas of the disability: communication, behavior, and social reciprocity. As cited in Case-Smith, Weaver & Fristad (2014), sensory processing problems in autism are believed to be an underlying factor related to behavioral/functional performance problems.

Existing practices in delivering evidence-based, content knowledge to and supporting skill development of school-based personnel are inconsistent at best and fall short of what is needed for the professional working with students with ASD. Teacher training programs must include components on the complexity of working with individuals with autism if they are to prepare professionals for the realities of inclusive classrooms. For teachers, new and veterans, to grow professionally, they must be part of learning communities that engage in "examination of assumptions, exploration of existing practice, and formulation of new possibilities" (National Research Center on English Learning and Achievement, 1998). Being grounded in a meaningful activity such as film analysis can be a rich opportunity to address these variables in the context of autism.

**Importance of Perspective Taking in Teaching**

In a global society, students with diverse backgrounds and learning needs are educated in the same classroom. In order to assist children in developing their own understanding of various values, cultures, motivations, and perspectives, teachers should possess their own knowledge and understanding. If teachers are to provide appropriate opportunities for their students to build these skills, they have to figure out the extent to which diverse learners comprehend context, expectations, directives, and so forth. Teachers are also tasked with developing and/or cultivating dispositional qualities for working with children, particularly those with learning deficits. This can happen more readily when the "shoe is on the other foot", and teachers have a sense of what the "other" is experiencing in every day contexts.

Social perspective taking (SPT) is both an art and a science. Gehlbach (2012) looked at SPT from data collected on experts and nonexperts through surveys and in-depth interviews. These participants were screened for their SPT abilities, selected based on an SPT criteria, and tasked with viewing video segments of where they had to take the perspective of the individuals viewed in the video and interpret how he or she felt or provide rationale for certain actions. Gehlbach found that the likelihood of demonstrating SPT was a function of whether participants viewing the segment had a level of connection with the content of the video, or viewed the content as important to them. He also found that the role participants take on in a given situation also impacts SPT – if a role requires someone to consider the perspective of someone else, they are more likely to attempt considering the thoughts of others. Gehlbach also concluded in this study that to develop accurate SPT of others, participants tend to rely on social cues such as facial expressions, tone of voice, gestures, body position, movement, and so forth. This additionally impacts our study since these particular variables are common deficit areas of those with autism. Teachers need accurate understanding of characteristics of autism in order to interpret cues correctly. Another Gehlbach study (2011) shows SPT improves teacher student relationships, and that accuracy of the perspective of one for the other makes a difference. Motivation for taking the perspective of each other also plays a major role.

Relationships between teachers and students matter; relationships are considered a critical psychological need in strengthening bonds and improving student outcomes (Gehlbach, Brinkworth & Harris, 2011; Ryan & Deci, 2000). This is an important factor to consider in preparing educators to work with disabilities, and in the focus of this study, educators educating students with ASD.

**Perspective Taking and Building Inclusive Environments**

In their study examining beliefs and attitudes of teachers educating students with disabilities in a general education setting, Swain, Nonness & Leader-Janssen (2012) found the more positive the attitude, the more likely there will be inclusive practices and individualized, appropriate instruction. Their work focused on meaningful learning experiences at the pre-service level, particularly a 24-hour practicum paired with a special education course. Future general education teachers participating in this pairing increased their knowledge of disability deficits and showed an increase in positive attitudes toward this population of learner. Scwartz & McElaudin (2012) found that pre-service teachers who reported higher levels of perspective taking on self-reports had a more supportive reaction and approach to young children demonstrating negative emotions and difficult behaviors as observed by evaluators in an early childhood education study.

De Oliveira (2011) describes a math simulation experience designed to deepen educator understanding of the needs of an English Language Learner (ELL). She created a series of math tasks that were designed to immerse teachers in a language they do not understand in order to experience linguistic difficulties and recognize that content areas are highly dependent on language for making meaningful connections in learning. The researcher reported themes that emerged from collecting reflective statements from 152 pre-service and in-service teachers. The researchers found themes as a result of the study which included reports of frustration, helplessness, fatigue, feeling lost, rushed, overwhelmed, confused, and so forth.

**Use of Media to Enhance Perspective Taking**

Studies and commentaries support the use of film, documentaries, and other media visual aids as effective pedagogical tools both in terms of skill development and learner engagement (Shalamah, 2009; Remender, 1992). The use of case study methodology as a teacher tool enhances the learning experience for teachers as they visually experience a scenario and apply theory to their practice being witnessed, particularly when utilizing reflective practice. Unfortunately, there is very little research regarding effective media uses to enhance perspective-taking in disability studies, particularly concerning professional development and teacher education (Kale & Whitehouse, 2012). As cited by Burden, Tinnerman, Lunce & Runsche (2010), there is some information on the use of digital simulation with medical and business students to offer "e-learning" opportunities, but the field of education has not been as prolific in studying instructional uses of technology for simulating affective and reality-based experiences for teachers. Burden et. al (2010) created a video simulation of an IEP meeting which was viewed and discussed by pre-service K-12 special education teachers depicting three difference meeting scenarios; viewing these pieces increased participant understanding of what could be expected when participating in an actual meeting. Further, follow-up dialogue with participants revealed that their comfort level in "real" IEP meetings was increased as a result of reviewing the simulation videos. Dotger & Smith (2009) saw improved reflections and personal critiques on professional interactions and boundaries as a result of simulated parent-teacher conferences and related situations. In using a case study and simulation experience, novice teachers had the opportunity to develop a sense of self in a contrived social context where they could make mistakes, learn the rules of appropriate engagement, experiment with ways of reasoning, and reflect on each other's points of view in a controlled experience; the researchers reported that this experience led to participants becoming educators who are "aware of the breadth and fluidity of teacher identity." (p. 178)

**Research Questions**

There is a need for research on the use of film as a tool to develop perspective taking in teachers, particularly concerning the perspectives of those with diverse learning needs. If a role requires professionals to consider the perspective of someone else, they are more likely to attempt considering the thoughts of others and perhaps build better relationships and rapport. Can this be accomplished – the understanding of such a need- through the viewing of a film? Perhaps an understanding of deficits can lead to an improved attitude and belief system toward the individual with autism or related disability. Research questions were based on the task of viewing an instructional, simulation film on autism by teacher and other school-based candidates. Will preserivce teachers demonstrate knowledge/understanding of the deficit characteristics exemplified by children and youth with autism? Will the film lead to perspective taking skills concerning individuals with autism that are aligned with known needs in the literature?

## *Method*

This project undertook three different aspects. There were specific methods used for film development, film field-testing, and post-testing of teachers and teacher candidates viewing the final film segment.

*Film production: The development of the simulation.* For the production of the film, the researcher worked with two individual students with autism and their father in the film development and production process, since all had experience in filmmaking and with autism spectrum disorders. Film activities ranged from scriptwriting to storyboarding to casting. Children with autism took the lead on concept formation, film writing, narrating, and directing. The researcher with her film crew engaged in blocking, rehearsal, film shoots, editing, and formatting to complete a nine-minute short film. The film was shot first person, meaning that is was shot through the lenses of a child possessing this disorder. The setting is in a middle school math classroom. A teacher candidate with a background in theater portrayed the math teacher. The researcher portrayed the paraprofessional. All other actors portraying teachers, instructional assistants, or general education students, had an autism spectrum disorder or were a family member of someone on the spectrum.

The film was shot with special care to simulate the experience a child with autism has navigating the general education environment. The filmmakers attended to filming techniques such as speed time, blurring of images, emulsification of noise, fast cut technology, and other editing features to create a feeling of disorientation or hyper-focus. Most of the film shots were captured in one take to give the feeling of being in the body of that child, most often focused on the floor or on seemingly superfluous details like what contents were on the teacher's desk or what peers were wearing or vocalizing (particularly concerning video games or other adolescent activities). The simulation shot through the eyes of a child with autism involved walking down the hall and entering a math classroom. There is a math lesson that is conducted as the child experiences an onslaught of sensory experiences, anxiety, distractions, and literal experiences. There is a fire drill event leading to the child having a "melt down" or physical shut-down due to sensory overload and being brought to the special education teacher who guides the child gently to safety away from the sensory stimuli. The aim of the film was to present typical areas of difficulty faced by a child with autism, such as pragmatics, obsessive interests, literal/concrete thinking, sensory integration, attention, executive functioning, anxiety, and emotional regulation.

*Field-Testing and Piloting.* Upon completion of the initial product, field-testing was conducted with an initial screening of the footage. A total of 11 experts reviewed the film for field-testing and gave feedback on accuracy, clarity, relevance, impact, and potential as a professional development tool in the field of education. In addition to three general educators and two special educators, the film was reviewed for content by a(n) psychologist, literacy specialist, occupational therapist, autism specialist, autism advocate, and social worker. Most feedback was related to the placement of written text and some of the audio. A majority requested a longer length film that included other sensory experiences such as the lunchroom, bus, recess, and hallway transitions. Field-testers, upon informal interview, made recommendations for critical discussion questions to use in facilitating dialogue post viewing such as communication skills, inclusion, sensory overload, literal thinking, accommodations and modification for general education teachers, and collaboration between general and special educators (and related service staff).

After making suggested revisions to the film and post-test, the researcher piloted the film for qualitative feedback with 30 post-baccalaureate initial certification teacher candidates during two Special Education introductory classes over two summer sessions. The candidates were graduate

students. They were asked to reflect on the simulation as a reflection located in an electronic course management system. These reviewers overall reported a deepened understanding for what children on the spectrum can go through in terms of core deficits of communication, behavior, and social reciprocity, as well as sensory overload. Most expressed a sense of empathy and willingness to make modifications in their classrooms to support their specific needs. Viewers reported feeling "very stressed out", "confused", "overwhelmed", and "exhausted" from the film and reported an understanding that those with autism may come away from the general education classroom with a similar affect. These reactions helped solidify the final post-test instrument and final film edits.

## *Results*

As a result of the completion and dissemination of this film on autism revised on reviewer feedback, pre-service and in-service teachers demonstrated improved perspective-taking with respect to children and youth with ASD during the pilot process of film review.

*Participant Post-testing.* The film was presented to pre-service and in-service teachers in Connecticut. Five hundred participants were comprised of 400 pre-service teacher candidates, 38 pre-service administrator candidates, and 52 other school-based personnel candidates (occupational therapy, physical therapy, speech-language, and so forth). Immediately following the viewing, participants completed a 10-item "test" with items specific to the lecture content delivered by the general education "teacher" from the film. Viewers were not told in advance they would receive a "test" on the lecture they were about to view in the film. This was done purposefully so as not to direct their attention to details other than the affective experience of "being in the classroom as a child with autism". Additionally, participants were asked to reflect on their own learning given the content of the film and information presented, both in class and as part of an electronic discussion board.

Table 1.
Responses to Math Lecture Quiz

| # | Item /prompt | **Don't Know** | **Math** | **Literature** | **Left Blank** | **Other** |
|---|---|---|---|---|---|---|
| 1 | *What topic (s) did the teacher present in the classroom lecture? List topics and explain how you know these were covered using* | 425 | 28 | 3 | 14 | 30 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | *specific examples from film clip.** | | | | | |
| | | **Don't Know** | **chocolate** | **candy** | **Left Blank** | **Other** |
| 2 | *What was inside the red cup on the teacher's desk?#* | 12 | 426 | 15 | 17 | 10 |
| | | **Don't Know** | **Yes** | | **Left Blank** | **Other** |
| 3 | *Was the teacher's explanations for any theories described within the lesson accurate? How do you know? Use examples.** | 424 | 16 | | 28 | 30 |
| | | **Don't Know** | **Math is calling** | **math** | **Left Blank** | **Other** |
| 4 | *What was the title of the worksheet assigned in class?#* | 14 | 420 | 15 | 29 | 22 |
| | | **Don't Know** | | | **Left Blank** | **Other** |
| 5 | *What details did the teacher use to describe Einstein in the class lesson? List as many details as you can remember.** | 459 | | | 9 | 32 |
| | | **Don't Know** | **Until 2:15** | **15 minutes** | **Left Blank** | **Other** |
| 6 | *How much time was given to complete assigned math problems? #* | 375 | 55 | 61 | 9 | 0 |
| | | **Don't Know** | **Dragon** | **Toy/Mythical creature** | **Left Blank** | **Other** |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7 | *What creature was on the teacher's desk? #* | 85 | 378 | 45 | 11 | 66 |
| | | **Don't Know** | **Nothing** | | **Left Blank** | **Other** |
| 8 | *What do you remember or understand about the content presented in the classroom lesson you just viewed?** | 50 | 420 | | 20 | 10 |

Note. Item prompts are items taken from the post-viewing quiz and viewer responses are listed to the right of the items. This table consists of a frequency count of viewers and responses. Items focused on * = academic-focused details or # = superfluous details.

Due to the multitude of sensory distractions and heightened anxiety often experienced by children and youth with autism, these students tend to focus on what may be considered unimportant by the teacher. These data demonstrate that this was the case for viewers put in this simulated experience viewing this film on ASD. They focused on details that were not important to the academic content with such precision and memory, yet were unable to capture the essentials of the standards-based lecture. Viewers were able to experience the root of why this was the case and identified sensory overload at the root cause of learner issues.

The use of electronic reflections allowed participants to continue the dialogue outside of the classroom simulation experience and comment on each other's reactions and feedback. Teachers' comments on the filmed lesson simulation experience through the electronic submissions indicated themes of perspective-taking of students with ASD (Table 2).

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Table 2.

Qualitative Feedback on the ASD Film Post-Viewing [Themes]

As a result of watching this film, I experienced…

| Perspective | Sample Quotes/Comments |
|---|---|
| Empathy | (How) Hard (it is) to be a learner with all the sights and sounds getting in the way – felt confused.<br>(I) Could not understand lecture, directions, or content topics.<br>Felt distracted by chocolate and medieval images.<br>(I had) Sadness for the student.<br>I had empathy for what the student had to go through during the lesson.<br>It would be hard to communicate my needs if I was a student in this situation. |
| Sensory Needs | I had sensory overload.<br>Startling.<br>Jolting.<br>Muffled noises and glaring lights – wanted them to go away.<br>Wanted to adjust volume or the color on the images to make them clearer.<br>More aware of how much the learning environment has sensory input that might bother a student or trigger something in them. |
| Physical Discomfort | It aroused my anxiety levels.<br>I felt uncomfortable.<br>What it feels like to be confused – I wanted to run and scream and shout to get away from the film footage. |
| Awareness | Gained perspective on how paying attention to everything can interfere with learning.<br><br>Could remember the name brand for the candy in the cup but could not remember any items from the math worksheet because of the classroom experience. |

| | |
|---|---|
| | Desire to learn more about helping a child with autism now that the needs are understood.<br><br>A student with autism may not be able to pay attention given everything else going on around them.<br><br>Behaviors of kids with autism may be their way for communicating in a stressful situation. |
| Need for Accommodations/Modifications | Encouraged – I am beginning to understand why a student with autism acts a certain way so I think I can try to make adjustments that will meet his or her needs.<br><br>Teachers can make a difference by anticipating how their students with autism may get distracted by aspects of the learning environment and can make adjustments prior to the lesson or during the instruction. |

In general, participants reported high levels of perspective-taking for their "student" with autism presented in the classroom film simulation. Many reported a desire to support him or her and create an inclusive environment to prevent some of those anxiety-provoking moments. Viewers responded thematically of feeling helpless, lost, and frustrated as a result of their experiences in the simulated film classroom. A majority of viewers commented on the power of media to enhance perspective-taking given the chance to view this film. Given the lecture quiz on content, participants failed on items related to academic-focused detail and exceeded in superfluous detail.

### *Conclusions and Implications for Future Use*

This project focused on the development and dissemination of an instructional case study film for use in a special education course for general education teachers. Teacher educators must be equipped with innovative tools for general and special educators to develop the knowledge, skills, and perspective-taking necessary to meet the needs of increasing numbers of children with disabilities. Simulations such as the film described herein can become part of the solution to breaking down barriers of not knowing the extent to which core deficits impact the educational experience for a child with a disability.

As a result of the completion and dissemination of this instructional video on autism, teacher candidates and advanced teachers demonstrated knowledge/understanding of the deficit characteristics exemplified by children and youth with autism. The film leads to perspective-taking skills concerning individuals with autism that are aligned with known needs in the literature. Further there was evidence of strengthened perspective-taking skills concerning individuals with exceptional needs. We also learned about the increased need for multi-media research in the areas of disabilities studies, particularly preparing teachers to work with diverse populations, and how multi-media simulations have the potential to increase the understanding of candidates and take down barriers.

Approximately 50% of viewers requested a version of the simulation that showed best practice approaches using the same scenario. They were interested in how the educators could have supported the child more or been more proactive in preventing the melt-down occurrence. De Oliveira (2011) offered a second phase to her math simulation research project where participants got to experience accommodations, modifications, and instructional strategies that aided their performance in solving math puzzles in languages they did not know and greatly benefitted by reflecting on specific tactics such as modeling, small step directions, paraphrases with extra information, and so forth.

Connecticut faces a compelling problem in the area of teacher education and preparing practitioners to work with the rapidly growing autism community. It is important to note that Connecticut has a set of guidelines for educating children and youth with autism; however, tools like film and webinars capturing perspective-taking revelations do not exist. Not every state has state autism teaching competencies, leaving schools and districts to their own devices in figuring out how to serve this population. Film tools as the one described in this study are an important approach to meeting the needs of Connecticut and every other state and nation tasked with educating children with autism and other exceptional learning needs. In conclusion, there were

clear albeit simple data to answer our research questions that have far reaching implications. Candidates demonstrated knowledge/understanding of the deficit characteristics exemplified by children and youth with autism. The film led to perspective-taking skills among pre-service and in-service teachers concerning individuals with autism that are aligned with known needs in the literature.

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