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KENNEDY  
CENTER**

**VSA Intersections:  
Arts and  
Special Education**

A Jean Kennedy Smith Arts and Disability Program

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Approaches Professional Papers Series**

**VOLUME 3**

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# Introduction

JENNA GABRIEL, ED.M.

*Manager, Special Education*

*The John F. Kennedy Center for the Performing Arts*

This third volume of VSA's Professional Papers Series, *VSA Intersections: Arts and Special Education Exemplary Programs and Approaches*, comes at an exciting time of growth in the field of arts and special education. As the Every Student Succeeds Act (ESSA) is implemented in schools and districts across our country, administrators and arts educators are encountering one of the broadest opportunities for arts education in recent history. ESSA lays the groundwork for increased access to arts education, and with the support of Senior Vice President of Education Mario Rossero and Director of VSA and Accessibility Betty Siegel, we at the Kennedy Center reaffirm our belief that arts education is an educational right of *all* students, including and especially those with disabilities.

Through our annual VSA Intersections: Arts and Special Education Conference, the Kennedy Center's Office of VSA and Accessibility drives ambitious goals around powerful arts education for our highest-need young people. In collaboration with the Kennedy Center's Department of Research & Evaluation—and with the support and advice of academics, researchers, and practitioners—we will put forth a 5-year plan for advancing the field through rigorous research around questions of Access and Equity, Instructional Design and Practice Innovation, and Efficacy and Effectiveness. This plan is slated for publication and distribution in 2017, and many of those advisors have contributed works to this volume.

Across art form, disability, educational setting, and age group, these papers address best practices, model programs, and rigorous research. The authors represent master teachers whose decades of classroom service provide us with important insights about collaboration to improve instruction, university faculty preparing the next generation of arts and special education teachers, community-based educators, researchers, and more. Together, this volume presents practices and approaches that make good on the promise of our field: to support the meaningful engagement and learning of students with disabilities in and through the arts.

In “Welcoming, Inclusive, and Supportive Arts Learning for Everyone: Designing for Access and Learning Variability,” Don Glass puts forth an expanded definition of access in a learning environment and proposes a set of strategies to maximize the collective impact of general education, arts education, and special education practices. A visual artist, learning designer, and developmental evaluator, Dr. Glass was a Universal Design for Learning Post-Doctoral Fellow and worked as the Director of Evaluation at VSA before joining the Kennedy Center as the Research Manager.

Susan D. Loesl's paper, “Consideration and Implementation of Assistive Technology Strategies Through Collaboration Between Arts and Special Educators,” pushes us to continue thinking about leveraging individual knowledge for collective impact as she presents frameworks for collaboration developed during her 28 years in the classroom. An adaptive arts specialist for the Milwaukee Public Schools and Adjunct Faculty in Art Therapy Undergraduate and Graduate Education at Mount Mary University, Susan focuses her paper specifically on

how collaboration between arts and special educators increases the efficacy of assistive technology use in the arts classroom.

This notion of building capacities in arts and special educators is vital to the continued growth of the field, and investing in preservice educators contributes to this growth by ensuring teachers are prepared for the classroom on Day 1. In “Self-Representation and Empowerment: Preservice Art Educators and Adult Learners with Autism,” Michelle Kraft combines phenomenological and action research methodologies to study how preservice art educators’ perceptions of inclusive classrooms were affected by opportunities to work with adults with autism. The collaborative field experience she describes represents a model program to develop young teachers’ comfort providing meaningful learning opportunities for students with disabilities. Dr. Kraft is a Professor of Art Education at Lubbock Christian University and is the co-author of *Including Difference: A Communitarian Approach to Art Education in the Least Restrictive Environment*.

In their paper “A Museum-Based Program to Support Adolescents and Adults with ASD: Results of a Pilot Study and Suggestions for Implementation,” Christopher Wenz, Jennifer Kowitt, and Linda Friedlaender describe a museum-based intervention designed to develop social and observation skills in young adults with autism. After sharing the results of their study, the authors provide recommendations for local museums to implement similar programs. A former special education teacher, Christopher Wenz is a doctoral student in the Department of Curriculum and Instruction at the Neag School of Education, University of Connecticut. Jennifer Kowitt is a doctoral student in the Special Education Program, Department of Education Psychology at the Neag School of Education, University of Connecticut, where she researches social skills instruction for adolescents with autism and out-of-school learning environments. Linda Friedlaender is the Curator of Education at the Yale Center for British Art.

The next paper in this volume also describes an approach for supporting skill development in adolescents with disabilities. In “Preparing for Life: The Role of Music in Facilitating the Transition of Older Students with Disabilities to Adulthood,” Mary Adamek and Alice-Ann Darrow draw on research and practice to describe the ways in which young adults with disabilities can develop age-appropriate life skills through music participation. Dr. Adamek is the Director of the Undergraduate Music Therapy Program at the University of Iowa and the co-author of the textbook, *Music in Special Education*. Dr. Darrow is the Irvin Cooper Professor of Music Education and Music Therapy at Florida State University, where her teaching and research interests include teaching music to special populations and inclusive practices for students with disabilities.

Zachary Kandler’s paper, “The Musical Working Game,” continues our exploration of music-based approaches. In his paper, Zachary describes the elements of a Musical Working Game, of the Nordoff-Robbins Music Therapy tradition, and how those elements map to developmental needs of students with autism using the DIR®/Floortime™ model. He then shares observations from the creation of a Musical Working Game with three cohorts of students with autism. Zachary Kandler is a NYC-based music therapist and certified Floortime™ practitioner who works at the Rebecca School, a therapeutic day school for children and adolescents with neurodevelopmental disorders.

Alida Anderson, Bridget Kiger Lee, and Megan R. Brown shift our focus to the dramatic arts in their paper “Promoting Literacy and Language Learning in Special Education through Drama-Based Pedagogies,” which presents a summary of research on drama-based pedagogies and their effects on language and literacy outcomes for elementary and secondary-age students with disabilities. They conclude with recommendations for research, policy, and practice. Dr. Anderson is an Associate Professor in the School of Education at American University whose research focuses on arts approaches to literacy learning for students with exceptionalities. She is also the editor of *Arts Integration and Special Education: An Inclusive Theory of Action for Student Engagement*. Dr. Lee is a Post-Doctoral Fellow at The Ohio State University with research interests in drama-based pedagogies on academic outcomes and the application of this research on educational policy. A certified elementary special educator, Megan Brown is currently a doctoral student at The Ohio State University, where her research focuses on drama-based approaches in the classroom setting.

We continue to explore drama strategies in the classroom with Katherine A. Berry, Alida Anderson, and Jennifer R. Frey’s paper “The Use of Tableau to Increase the On-Task Behavior of Students with Language-Based Disabilities in Inclusive Language Arts Settings.” This paper reports positive effects of teacher’s use of tableau in language arts classrooms on the on-task behaviors and oral story recall of their students with language-based disabilities. A former special educator, Dr. Berry is a Project Manager in the Department of Special Education at the University of Texas, Austin. Dr. Anderson is an Associate Professor in the School of Education at American University whose research focuses on arts approaches to literacy learning for students with exceptionalities. She is also the editor of *Arts Integration and Special Education: An Inclusive Theory of Action for Student Engagement*. Dr. Frey is an Assistant Professor of Special Education and Disability Studies and the coordinator of the Early Childhood Special Education Graduate Program at The George Washington University Graduate School of Education and Human Development.

This volume concludes with an examination the effects of multidisciplinary arts programming on students with autism. Specifically describing the ArtAbility program at Imagination Stage, Eve Müller, Diane Nutting, and Katie Keddell’s paper “*ArtAbility*: Using Multi-Genre Arts Programming to Support Creative Engagement and Social and Emotional Learning in Middle-School Students with Autism” presents a brief literature review alongside their positive findings and recommendations for future research and practice. Dr. Müller has published extensively in the areas of ASD, language development, and social and emotional learning. She is the Coordinator of Program Evaluation and Outcomes Research for the Ivymount School and Programs. Diane Nutting is an independent trainer and consultant with nearly 25 years of experience in disability, access, and inclusion within the performing arts, including at City Theatre Company, New Victory Theater, and Imagination Stage. Katie Keddell is former teaching artist and paraprofessional and is currently the Access Coordinator for Imagination Stage.

The *Exemplary Programs and Approaches* series provides practical tools to inform classroom practice, while also taking its rightful place in the canon of arts and special education literature, contributing to our growing understanding of the importance of arts learning for students with disabilities. We are pleased to share this volume with you, and hope that the papers that follow stimulate your thinking, spark conversation, and enrich your practice.

# Welcoming, Inclusive, And Supportive Arts Learning For Everyone: Designing For Access And Learning Variability

DON GLASS

**ABSTRACT:** *This paper proposes a set of strategies to increase the interaction and integration of general education, arts education, and special education knowledge and practices. Its purpose is to systematically improve the arts teaching and learning opportunities for a wide range of learners. The first part of the paper proposes an expansion of the definition of access to include optimal learning design for variability. The second part of the paper argues to move beyond individual or even small group efforts to systematic initiatives that build collective capacity for collective impact. It proposes a series of nested strategies, some of which have emerged from what we know is effective in professional development, and some of which are now on the cutting edge of improvement science and developmental evaluation. A central orientation of this capacity-building effort is to learn about the varying ways that people learn by observing and analyzing data from students in the academic margins, particularly those students with disabilities. This collective effort should draw from the expertise and practices of arts, general, and special educators, and be systematically informed by disciplined inquiry, practical measurement, and expert-user feedback from learners. The potential impact of this process is to expand and integrate what we know about how to design multiple learning options in varying contexts, so that there is an increased potential for a wider range of learners to find their pathways to success.*

## Part I: Expanding the Definition of Access

Organizing for collective impact is a growing trend in the arts education field. Equitable access to high quality arts education is the focus of many of these initiatives coordinated by school and community stakeholders. In many cases, equitable access means working toward a fair distribution of arts learning opportunities, particularly for young people who may have been excluded or underserved in the past. Solutions for equitable access to high quality arts education include hiring ample arts specialists, requiring arts course work and exit requirements for all students, providing extended day arts learning activities, and engaging community and cultural partners to provide arts learning opportunities in and out of school.

Although this equitable distribution of arts learning is the foundation for access to opportunity, what happens when a young person gets to engage in a new arts experience, but finds barriers to learning that are physical, linguistic, or cultural? Gigi Antoni of Big Thought, a leader in the collective impact effort before it had its current name, once used the metaphor of inviting students to an arts banquet dinner table. The idea was to provide more spaces at the table for everyone to be included. She then aptly noted that getting young people to the table is not enough, you may also need to provide culturally specific background information to participate in and enjoy the banquet meal.

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We can extend this metaphor for arts learning opportunities further. What if the table and chair heights made it difficult to reach the utensils and food? What if you arrived using a wheelchair--would there be enough space to navigate around and be at the table? Does everyone know and feel comfortable about what you do with the napkin, or which fork or spoon you are supposed to eat with which food? What if you have a diet restriction for health, religious, or personal reasons--will there be options for you? This more complex and varied picture more accurately reflects the cultural diversity and natural variability in our population. Access is not just about inclusion in the opportunities to participate--which in many cases is a very substantial improvement--it is also about creating a welcoming and supportive learning environment that considers

- Barrier-free physical and communication accessibility;
- Cultural relevance and responsiveness; and
- Optimal design for learning variability.

### **Barrier-free Physical and Communication Accessibility**

Learning in the arts will not likely happen if learners cannot get access to curricular content in format(s) that they can perceive and cognitively process. Nor will they be able to express or communicate what they know without tools and communication media that they can confidently and effectively use. Consequently, physical and communication barriers are an additional level of access to consider by arts educators. At present, 12.92% of students in U.S. schools have a designated disability (US Department of Education, 2016). These students are entitled to have accommodations and supports accorded by the federal regulations in the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act, and the Individuals with Disabilities Education Act (IDEA).

Although these laws set out the requirements for schools to provide accessible learning materials and provide the least restrictive environments for learners with 504 plans or IEPs, more learning design work can be done. Everyone should be provided with options for multiple, sensory-friendly formats; media with captioning, audio description, and transcription; print-to-speech options; adaptive tools/instruments; and assistive technologies (Meyer, Rose & Gordon, 2014). In addition, arts spaces need to be designed to provide space for movement as well as offering tools, resources, and work areas that are in view and in reach. A significant resource in the arts field--which includes a universal design perspective--is the *Accessibility Planning and Resource Guide for Cultural Administrators* (NEA, 2011). However, this resource does not include guidance on IDEA or on learning design. The Kennedy Center's LEAD conference is an incredible capacity-building resource for arts administrators that is becoming more integrated with the learning design focus of VSA. The fields of accessibility and special education can contribute much expertise in this area to broaden the use of assistive tools, technology, and supports to a broad range of learning environments to remove barriers for all learners.



## Cultural Relevance and Responsiveness

American schools continue to become more diverse and heterogeneous with increasing linguistic and cultural diversity. For example, English learners have become the fastest growing category at 9.3% of the school population (US ED, 2016). Many of these English learners may also have a special education designation and/or be living in poverty. It is important to note that there is complexity in any of these categories, and that these categories are not homogeneous or mutually exclusive. Any non-dominant group may be subject to disability, racial, or ethnic stereotype threat, which can have negative effects on academic performance. Interestingly, the consensus on instructional design for English learners recognizes this diversity and calls for culturally relevant content and scaffolded supports for language, vocabulary, comprehension, and communication (Cummins, 2016). This would require the activation or provision of background knowledge and a choice of communication media, as well as content selection options that are personally and culturally relevant and connected to meaningful personal learning goals (CAST, 2012).

In their literature review on cultural responsiveness, Stone, Hanley and Noblit (2009) highlight some key connections between arts learning opportunities and being relevant and responsive to culture. Some of the key concepts include involving community and families to learn about needs and resources, allowing for student voice and choice, viewing culture(s) as an asset, and assuming success and high expectations for all students.

As artists, students are the central meaning makers, and meaning-making is an interactive process that enables individuals to give order to experience, and to communicate it to self and others. Students can create and recreate experience to express meaning. Thus student voice, which is often ignored, particularly for disfavored ethnic and racial groups, is empowered. Engagement in the arts may provide a means of redirecting the anger, anxiety and alienation reported by numerous students of color and students who live with the challenges of poverty. (p.66-7)

Arts educators in schools and at community-based organizations can provide learning opportunities for exploring culturally rich and responsive content, and using various media to construct and express meaning. Arts educators, English language specialists, and community-based teaching artists can help to broaden and expand the culturally relevant content and pedagogy to reach and engage a whole range of students. What we can understand about English learners or students with disabilities, and how they learn, may be instructive in how we design for many other types of diversity.

## Optimal Design for Learning Variability

Advances in the learning sciences have provided insights into the mechanics of learning that function behind existing theories and observational evidence (National Research Council, 2000, Organisation for Economic Co-operation and Development, 2007). Neuroscience is showing us that the brain is flexible, plastic, and naturally variable. Learning is a complex interaction between our brains and our environment--meaning we may learn differently depending on the context and conditions with which learning opportunities are presented

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(Fischer & Bidell, 2006). Learning is also influenced by the limitations of our perceptual and information processing systems, our subjective memories of past experiences, and the interactions across multiple neural networks associated with recognition, emotion, and cognition (Immordino-Yang & Damasio, 2007). The natural variability in these neural networks means that differences in how we learn are normal and generally predictable. Consequently, we should take this understanding of variability into consideration when providing supports and options for multiple learning pathways (Meyer, Rose & Gordon, 2014). In other words, the learning sciences are telling us to design multiple and flexible learning options based on what we know about how the brain learns in varying contexts.

In their article, *The Future is in the Margins: The Role of Technology and Disability in Educational Reform*, Rose and Meyer (2000) explain how they expanded what they understood about how people learn through observing the interactions between students with disabilities, assistive technologies, and their learning environments. They recognized that many of these supports could also be useful for learners in general education as learning options. Coupled with the learning science evidence and influenced by a universal design perspective, Rose and Meyer proposed a set of universal design for learning (UDL) principles that illuminated the idea that flexible and varied learning design that addresses human growth and variability, as well as fosters expert learning strategies, could remove barriers and expand access to high quality learning opportunities.

**FIGURE 1** provides the URLs to resources for accessibility, cultural responsiveness, and universal design for learning.

### **URLS TO RESOURCES FOR: ACCESSIBILITY, CULTURAL RESPONSIVENESS, AND UNIVERSAL DESIGN FOR LEARNING**

#### ***Barrier-free Physical and Communication Accessibility***

- Accessibility Planning and Resource Guide for Cultural Administrators: <https://www.arts.gov/accessibility/accessibility-resources/publications-checklists/accessibility-planning-and-resource>
- LEAD: <http://education.kennedy-center.org/education/accessibility/lead/>

#### ***Cultural Relevance and Responsiveness***

- Cultural responsiveness, racial identity, and academic success. (2009): [http://www.heinz.org/UserFiles/Library/Culture-Report\\_FINAL.pdf](http://www.heinz.org/UserFiles/Library/Culture-Report_FINAL.pdf)

#### ***Optimal Design for Learning Variability***

- UDL Guidelines. (2012): <http://www.udlcenter.org/aboutudl/udlguidelines>
- Universal Design and the Arts. (2013). Harvard Ed Review. UDL Studio Remix: <http://udlstudio.cast.org/titlepage/display/READABLE/bookId/166869>

## Part II: Collective Capacity Building for Collective Impact

Operationalizing a broader definition of access that includes equitable opportunities, physical and communication accessibility, cultural responsiveness, and design for learning variability seems to be a very tall order. But this is just the complex type of problem that a collective impact initiative is meant to address. It brings together varied participants with different expertise, resources, and opportunities into a collective effort with shared goals and measurements around solving a common problem of practice (Kania & Kramer 2011, Preskill, et al., 2014).

In this part, I will lay out a set of nested strategies that may help us move faster and more systematically toward our collective aim of improved equitable access to high quality arts education. First, I will introduce the curriculum design framework of universal design for learning (UDL). I will then argue for systematically using this curriculum design framework in a professional learning community with diverse professional stakeholders to focus the work on the improvement of access, cultural relevance, and learning design. Finally, I will argue for setting up a networked improvement community so that the focused work of professional learning communities can be reliably adapted and improved across varied contexts using structured and disciplined cross-site inquiry.

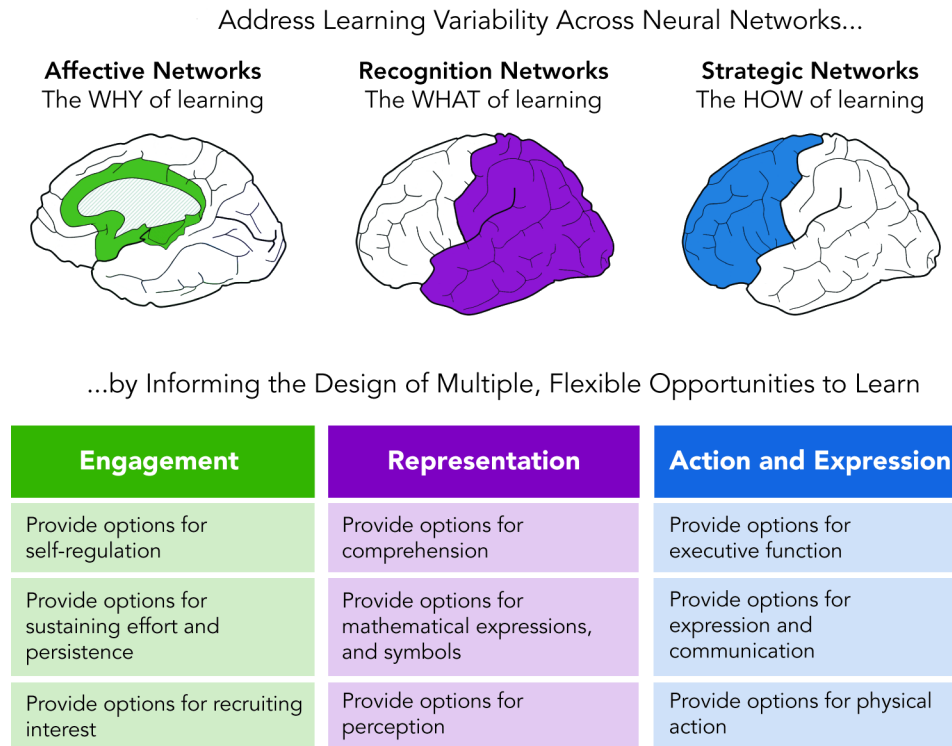
### Curriculum Design Frameworks

A curriculum design framework is a practical design tool that educators can use to design and evaluate their curriculum. UDL is a translational framework developed to remove barriers to access, address learning variability, and support expert learning strategies (Meyers, Rose, and Gordon, 2014). A translational framework allows the learning sciences to be operationalized into practice so that users do not have to be neuro-scientists to benefit from what we know about how we learn. UDL has its foundations in cognitive neuroscience, universal design, and digital assistive technology. UDL is based around three principles that recognize learning variability and support learning across three generalized neural networks by providing guidance for designing multiple, flexible learning options for

- Representation (recognition neural networks)- the *what* of learning;
- Action and Expression (strategic neural networks)- the *how* of learning;
- Engagement (affective neural networks)- the *why* of learning.

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**FIGURE 2.** Universal Design for Learning Guidelines



In Figure 2, the UDL principles are operationalized into a set of UDL Guidelines which are organized vertically by neural network, and then horizontally on three levels to support access and accessibility (bottom row); scaffolded guided practice (middle row); and independent practice with expert learning strategies (top row). The UDL Guidelines (CAST, 2012) are a high-leverage tool that translates learning science research into a manageable set of guidelines to prompt curricular design thinking toward supporting accessibility and learning variability. The UDL principles are defined in the Higher Education Opportunity Act of 2008, and are included in the National Technology Plan (US Office of Education Technology, 2016) and the Every Student Succeeds Act of 2015. The principles were also considered in the development of the Common Core State Standards and the corresponding assessments from Smarter Balanced and Partnership for Assessment of Readiness for College and Careers (PARCC).

Educators can use these guidelines to identify potential barriers, expand learning options and supports, and design curriculum and assessment that recognizes the cognitive and affective aspects of teaching and learning. The guidelines reinforce the fact that curriculum needs to be designed for how we know that the brain learns. They also remind us to design learning options and assessments that support and provide feedback on engagement and affect, not just comprehension and knowledge use.

**FIGURE 3** highlights several sources for case studies of how the UDL Guidelines have been used to make arts integrated curriculum more accessible, flexible, and varied for a wide range of learners.

### CASE STUDY SOURCES

- **Contours of Inclusion: Inclusive Arts Teaching and Learning.** (2010). [ERIC: ED522677](#)
- **The Arts Option.** (2012) In *Universal Design for Learning and Technology in the Classroom, What Works for Special-Needs Learners Series.* [Guilford Press](#)
- **Arts and UDL Group.** National UDL Center's [ning. UDL Connect](#)

### Professional Learning Communities

Michael Fullan (2010) argues that building collective capacity to improve core routines of instructional practice is a key component of any collective instructional improvement:

“...The solution is not a program; it is a small set of common principles and practices relentlessly pursued. Focused practitioners, not programs, drive success... Professionals working together with focus is what counts.” (Fullan, 2010, p.59)

While a curriculum design framework like UDL can be used by individual educators, it has increased power when used by a collective group with a common domain of interest in a community of practice (Wenger et al. 2002). A more structured and routine form of a community of practice that is often used in the educational setting is called a professional learning community or PLC. A PLC is typically a group of six to eight educators who meet regularly to design and evaluate their curriculum, provide peer feedback, and examine student work and other data. PLC's can meet during common planning time or after school. Sometimes PLC's are led by coaches or outside facilitators. Often the leadership is distributed and participants take turns facilitating, presenting, and responding using protocols to keep the discussion focused, purposeful, and on time.

Having a diverse group that provides expertise from general, arts, and special education can provide multiple perspectives on how to support varied learners in rich, meaningful, and effective ways. As we saw in the previous sections, special educators, arts specialists, teaching artists, and English language specialists can bring useful resources and pedagogical knowledge to the table. In other words, collective capacity building can expand and integrate the relevant knowledge and practices across disciplines and education sub-fields so that it can be systematically used to address predictable differences in learning.

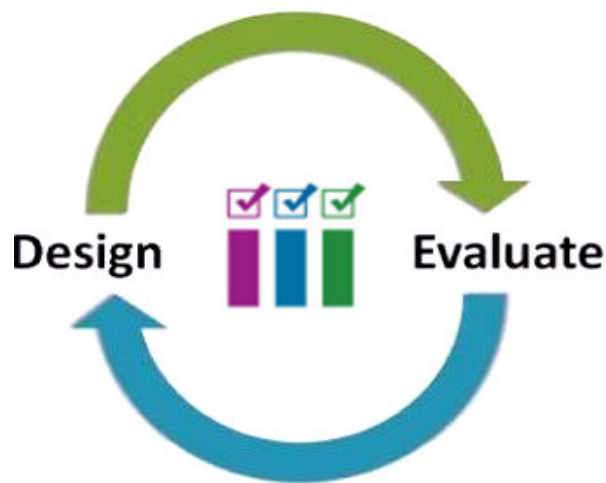
A well-structured, facilitated, and focused PLC can be a powerful contribution to the kind of embedded, meaningful, and useful professional learning that Fullan talks about. Although many schools and districts now have established PLCs, DuFour, DuFour, and Eaker

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(2008) lament that many function in name only without a strong focus on purposeful instructional improvement. The purpose and focus of a PLC is an important factor of its success in changing core instructional routines and improving instruction. From their review of the empirical literature on PLCs, Vescio, et al. (2008) argue that a PLC's focus on teaching practices was a strong predictor of change in instructional practice, as was a focus on student learning for increasing student achievement. PLCs can use a curriculum design framework like the UDL Guidelines to focus and structure educators' design thinking on the educative purposes of providing accessible, varied, flexible, and culturally responsive learning options and supports (Glass & Donovan, 2017).

**FIGURE 4:** UDL Design and Evaluation Cycle



In Figure 4 we see a diagram of a disciplined inquiry cycle that illustrates the collective work of a PLC to design, evaluate, and improve curriculum. The cycle includes the basic phases of designing curriculum, teaching or implementing the curriculum, and then reflecting on and evaluating the effect of the curriculum. The cycle then comes back to the design or revision of curriculum, based on gathered data and feedback. At the center of Figure 4 is the UDL Guidelines logo that is color-coded to match the UDL Principles. The UDL Guidelines can be optimally utilized in the design and evaluation phases of this cycle to take stock of curricular options and supports, identify potential barriers to learning, and prompt thinking to include supports that may not be currently present.

In the evaluation phase, it is critical to review a range of student work, performances, and disaggregated assessment data to identify areas of variance in performance. Linda Darling-Hammond (1996) has long argued that this type of grounded assessment discussion is a powerful form of professional learning because it helps educators to use authentic evidence to better understand how students are understanding and applying ideas, content, and practices, as well as provides feedback about the learning design of the curriculum. Many protocols are available to provide a structured way to guide the review of student performance and give feedback (McDonald, et al., 2003).

Another valuable source of data can come from observing students and eliciting student feedback on their interest levels, learning challenges, and learning strategies. The field of universal design commonly uses feedback from expert users in the design of tools and environments. Educators can benefit from providing student voice through feedback opportunities for students to help recognize learning barriers and uncover misconceptions of content. Careful observation of students can also help educators to appreciate and better understand the varying ways students take in and demonstrate knowledge and ability. For example, Rose and Meyer (2000) were inspired to develop UDL because of what they learned through their interaction, observation, and feedback from learners in the academic margins. This productive interaction provided ideas for a range of learning supports that could then be used as options offered to a wider range of learners. This generative UDL design and evaluation cycle will be a central process in the PLC described in Figure 5.

**FIGURE 5.** An Arts and UDL PLC

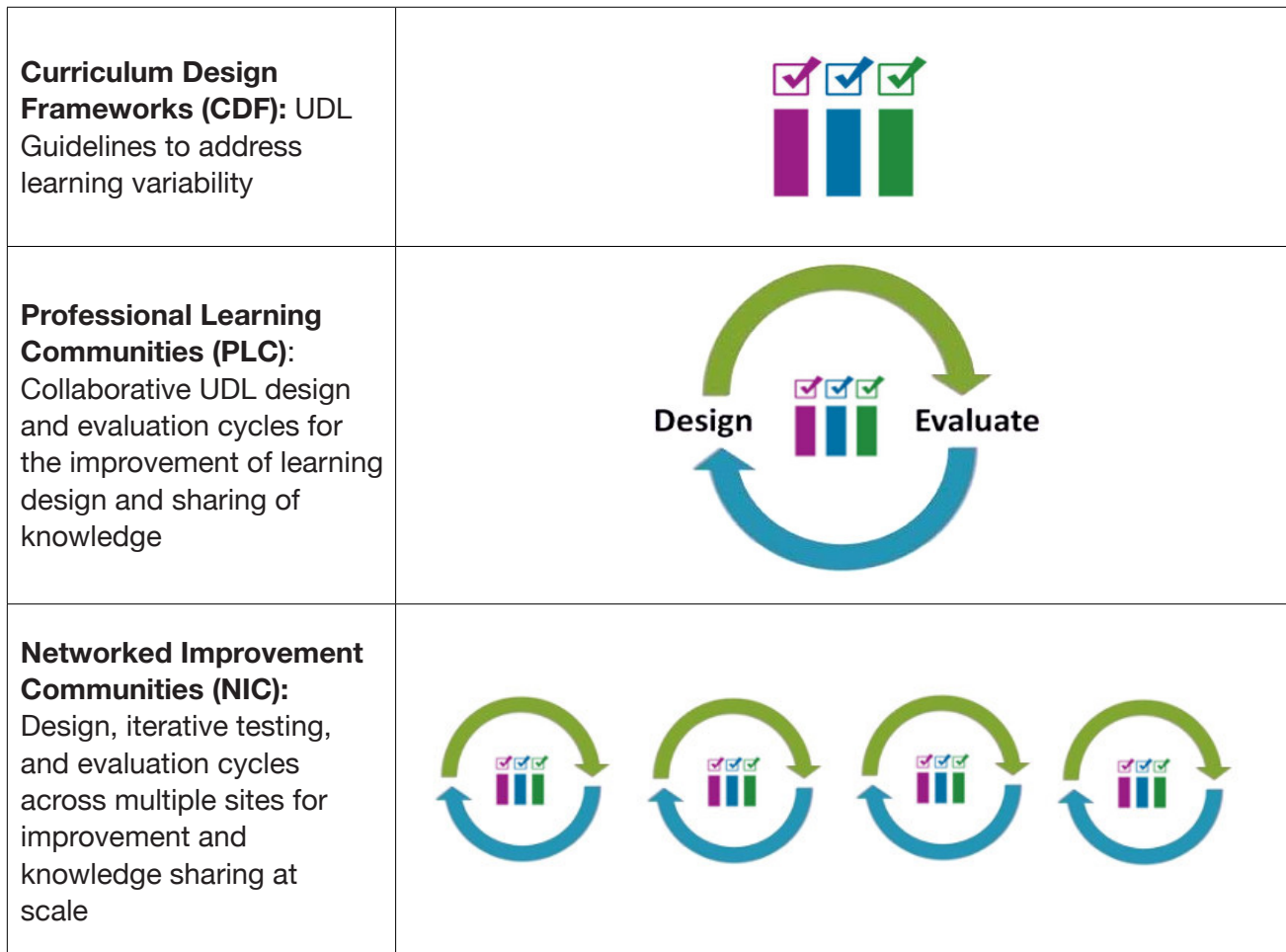
### HOW ONE PLC WORKS

Visual arts teachers from across the Worcester, MA public school district are working with VSA Massachusetts to initiate a PLC that is exploring the use of the UDL framework in the arts. Every 8 weeks they select a specific problem of practice that is generated by an initial UDL review of curricula. Teachers propose instructional strategies or supports that may address a specific learning barrier and try it out in their classrooms. At the weekly sessions they use protocols to share and evaluate their curricula using the resulting student work and other data. Participants get to share ideas and practices, as well as receive evidence-based feedback from a coach and peers.

## Networked Improvement Communities

A well-designed PLC can contribute to improving curriculum. This practitioner inquiry can provide useful information and cases about effective and innovative teaching and learning. What may be missing in a PLC are the supports and evaluation capacity to iteratively test an innovation over time and systematically gather data to explore what works, for whom, and under what conditions, using a common measurement system across multiple sites.

**FIGURE 6.** Nested Improvement Strategies: Collective Capacity Building for Collective Impact



The real question is, “How do we learn to make a successful program, curriculum, or instructional strategies work reliably for all students in multiple varied contexts?” The field of improvement science provides some methods that can be used to systematically test innovations to see how they work in multiple sites. These methods shift the focus from the fidelity of implementation to the reliable application of an innovation in a particular context. This process may require an adaptive integration so that the innovation works for everyone in varying situations (Bryk et al., 2014).



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*Networked Improvement Communities* (NIC) use the disciplined inquiry methods of improvement science (Langley et al. 2009) across multiple contexts to learn together about how to make teaching and learning innovations work reliably for everyone. In improvement science, the *problem of practice* is often better understood by locating the problem in a contextual analysis of the complex system that surrounds the problem, as well as gathering on-the-ground information and feedback from expert users. In this case, student work, assessment data, and student feedback are very important sources of data to use to develop a theory of action, generate and test the causal chain of potential drivers, and gather practical measurement evidence of improvement.

Unlike external program evaluations, improvement science is a form of developmental evaluation that uses practical measures to gather data for progress monitoring across sites. These measures are quick, manageable, and useful for practitioners to gauge the effects of any tests of an innovation, and to make evidence-based decisions about what to do next. The measures are meant to gather frequent data on improvement that can be visually displayed in a time series and other easy-to-understand formats. In a networked improvement community, similar aspects of the innovation can be rapidly tested across multiple sites to identify and address areas of variance. (See Figure 6, Row 3.) If the variance in the system seems unproductive, then some standardized routines of work may need to be developed. In cases where variance comes from the natural diversity and variability of learners, then multiple options and supports may need to be introduced and tested. A network improvement community hub helps to manage the knowledge development and management of the structured inquiry process across multiple sites, as well as provides technical resources, tools, and assistance around data gathering and use.

### Drivers of Change

What would it take to make a system like this work within a collective impact initiative focused on improving the equitable access to high quality arts education for everybody--to be accessible, culturally relevant, and optimally designed for learning variability? To conclude, I will lay out the potential primary drivers of an effort like this:

- UDL Professional Learning Modules, Coaching, and Resources for understanding and systematically applying the *UDL Guidelines* to pay attention to learning variability, identify learning barriers, and expand and test curricular options.
- Site-based Supports for PLC Work, many of which already exist in the structure of schools (scheduled collaborative time), but may require a diversification of participation to include arts specialists, special educators, teaching artists, and English language specialists. The PLC must also take on an evidence-based improvement focus.
- Improvement Science Coaching for guided practice on disciplined inquiry using improvement science methods. The aim is to make practical measurement through data collection, analysis, and prediction a part of the habits and routines of the PLC. Coaches would ideally be people who are familiar with developmental evaluation or improvement science methods.

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- Improvement Network Hub: To make this initiative more than a few bright success stories would require a larger reform support organization to manage the network hub. Such an organization would organize the knowledge sharing and management of multiple PLCs and sites that address similar problems of practice and learning into a *networked improvement community*. The hub would guide the cross-site research and development to learn how to improve the work in each of the PLC's contexts. This includes providing infrastructure, e.g., electronic platforms with community-based knowledge generation; crowd-sourced, practice-based evidence; reorientation of convenings from program-based presentations to problem-based, contextual solution exchanges where practice-based evidence is routinely used to understand and address variance and expand productive supports for diversity and variability.

UDL can provide the curriculum design framework to focus the work of professional learning communities made up of diverse stakeholders to improve accessibility and learning design. Improvement science can provide the disciplined inquiry methods for professional learning communities to make the use of practice-based evidence into a habit of mind and routine. A networked improvement community hub can support and manage the design, testing, and integrative adaptations that are required for practices to be shared and reliably used across varying contexts.

Interestingly, there seems to be a confluence of UDL and networked improvement science. Both are interested in addressing variance in a system. UDL argues that much of the learning variability is naturally occurring and can be predictably taken into account in the design of curriculum by systematically using the learning science-based UDL Guidelines and paying attention to student performance and feedback. UDL is a powerful tool for designing multiple, flexible curricular options and learning pathways to carry the load of predictable variability, so that instructional energy can be used to identify and address barriers that we have not yet expected.

Improvement science is also interested in variance--in reducing the types of variance that are unproductive aspects of routines and procedures in a system. Using frequent practical measurements allows educators to get feedback and test changes to their curriculum and instructional practice. Together, this proposed set of nested drivers can serve as a proposed theory of action for the arts education field to focus our collective impact on better understanding learning variability in context, drawing useful knowledge and practices from across disciplines and educational sub-fields, and then reliably adapting these practices for their students to improve access to high quality arts education for everyone.

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# Consideration and Implementation of Assistive Technology Strategies Through Collaboration Between Arts and Special Educators

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**ABSTRACT:** *Collaboration between arts educators and special educators is essential for the implementation of assistive technology strategies in arts classes for students with disabilities. This paper discusses how assistive technology can be considered for students with disabilities in the arts classes through the use of a collaborative process called the SETT Framework. Strategies for identifying assistive technology specific to arts classes are presented. Consequently, arts educators and special education teachers can effectively collaborate to determine to meet the needs of all students requiring assistive technology throughout all of their students' curriculums.*

Many K-12 arts educators are inadequately prepared and supported to teach students with disabilities in their arts classes. Consequently, arts educators' knowledge and implementation of access to the arts curriculum through Assistive Technology (AT) may adversely affect a student's ability to be successful in their arts classes. (Coleman, Cramer, Park & Bell, 2015). This paper discusses connecting arts and special educators through assistive technology supports and offers collaboration strategies to provide shared knowledge and optimal learning environments across all the students' learning curriculums.

The author draws on 28 years of experience assisting educators as a consultant in adaptive arts strategies and low-tech adaptive arts tools in public schools, universities and organizations throughout the United States as well as in Canada, Puerto Rico and China. Most prescient to this paper is the author's work in the Milwaukee Public Schools, where she is an Adaptive Art Specialist/Art Therapist and Assistive Technology (AT) Support Staff, supporting AT across the curriculum, including classes in the arts. Intertwining knowledge and strategies of the arts, special education and assistive technology for arts educators, this article presents the authors' insights and experiences so that they may inform the practice of other arts and special educators.

Traditionally, assistive technology is primarily considered for academic classes with more emphasis on reading and writing. While students' access to technology supports in academic classes may increase during their school years, arts educators frequently are not included in the consideration and implementation of AT in the arts classrooms. Reflection on the learning tasks in the arts classrooms indicates that many activities could utilize assistive technology to engage and support the students' experiences of their arts classes. Unfortunately, many low- to high-tech assistive technology interventions, including communication supports, visual strategies, and computer supports for reading and writing, are unfamiliar to arts educators. Stress and frustration can occur within the students who can't complete their arts tasks due to the inconsistent AT implementation throughout all their classes. In contrast, collaboration between all educators in considering and implementing assistive technology across the curriculum can create powerful learning environments.

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An understanding of assistive technology is critical when embarking on such a collaboration. Assistive Technology is comprised of two components: device and service. According to the Individuals with Disabilities Education Act (IDEA) an assistive technology device is “any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of a child with a disability” (Individuals with Disabilities Education Act of 2004, Sec. 300.5). The second component of assistive technology is service (Individuals with Disabilities Education Act of 2004, Sec. 300.6). Assistive technology service is “any service that directly assists the child with a disability in the selection, acquisition, and use of an assistive technology device.” (Assistive Technology Training Online Program, 2005). In order for a student to receive assistive technology as part of the instructional program, an Individualized Education Plan (IEP) is created by educators and professionals engaged with the identified student. IDEA 2004 requires IEP teams to consider the assistive technology needs of all children with disabilities (IDEA, 20 U.S.C. 1414(d)(3)(B)(v)). The law requires schools to use assistive technology devices and services “to maximize accessibility for children with disabilities” (IDEA, 20 U.S.C. 1400(c)(5)(H)).

Assistive technology supports and tools are classified as low-, mid-, and high-tech. Most often, low-tech AT is identified as tools that do not require batteries or electricity, are simple, inexpensive, fairly intuitive, and require little to no training. Mid-tech tools may use basic electronics or batteries and require minimal training. Most high tech devices will require electronic hardware and training for the student, staff and parents if it is also used at home. It is critical that a trial of device(s) be conducted to identify the most appropriate device for the student. The length of trial depends upon the number of opportunities the student has to engage with the device over time, but oftentimes 4-6 weeks of trialing can confirm the success or failure of the device.

During the hands on process of using the potential AT with the student in the arts classes, it is important to identify who will be assessing the success of the device. Arts educators are specifically trained in the use of the tools and instruments of their disciplines and their knowledge is critical to the student’s gaining skill and expertise for personal expression. Students’ acceptance of the AT is key in the implementation and ongoing use of AT. Abandonment of AT by students is a significant factor in the failure of AT in the classroom, and is tied to the student’s acceptance of the identified support. Family, peers and school staff all have a role in AT acceptance by students. Not only do staff work to determine what AT will be the most useful for the student, they must work to engage the student to embrace the AT. Issues such as being singled out by using AT, looking different from their peers, and using tools that make the student appear immature can cause AT to be discontinued. Trialing involves the student in making decisions about their use and comfort with AT. Collaborating to determine how to trial and then subsequently implement the AT into the arts classroom is critical to the success of the student and staff.

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## The Arts Teacher and the IEP

The assistive technology service component requires IEP teams to evaluate and consider assistive technology supports for students, and upon determining that the student requires the assistive technology to access and engage with their curriculum, the IEP team then acquires the assistive technology, trains the student and staff as necessary, maintains the assistive technology, and implements it across the student curriculum. Yearly, the IEP team reconvenes to reassess the student's educational progress and determine if the assistive technology is still required. The team continues to provide and support the required assistive technology until there are changes in the student's needs.

Some low-tech supports are individualized or customized by the educator or support staff working with the students. It is important to note that many assistive technology supports are identified initially by occupational or physical therapists, as well as speech and language pathologists assigned to individual students. Their knowledge and expertise in assistive technology should be strongly encouraged by all the members of the IEP team to help identify the most appropriate tools for the students. Although numerous students who require AT may have physical challenges, a student with any type of disability may require assistive technology. For example, a student with a cognitive processing disability and/or difficulty traditionally reading an arts textbook may easily comprehend the book when it is read aloud by a text to speech software program or when uploaded to an MP3 player.

Too often, the IEP teams don't give adequate consideration to the potential of assistive technology in arts classes--the teams do not consider assistive technology supports beyond the other academic classes. The IEP team is required to have a general education representative on the team, and many times that person could be an art educator. Inclusion on an IEP team offers an opportunity for the arts educator to learn what assistive technology supports are currently being considered or are already implemented for the student.

Many schools do not necessarily separate these kinds of tools and strategies under a label of assistive technology. Many school districts across the country do not have an assistive technology department to support the schools, educators, and parents in the selection and use of AT for their students. The AT information may come from occupational or physical therapists or speech and language pathologists, and some school districts use educational assistive technology consultants or consultants provided through educational cooperatives. It is only identified as AT when the student requires it for access to their curriculum and it is written in their IEP. When schools engage the principals of universal design, the integration of AT tools for all students in the classroom can significantly affect the identified student's attitude for use of AT in the classroom. If all students consider the specialized tools as being part of the overall curriculum, no students feel singled out, and AT implementation is usually more successful. For example, an art educator can provide a variety of scissors for their all their students, including specialized ones indicated for a particular student. All students can utilize the scissors by independent choice and for many, adaptive scissors are actually more comfortable and easier to use than traditional scissors.

Any learning tool can become assistive technology when it is required for the student to access, engage and participate. When an IEP team has determined by trial that the tool can



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be successful, the tool can be deemed required and then written into the student's IEP. All teachers interacting with that student are required by law to provide the identified assistive technology in their classes--no matter what curriculum area.

Arts educators cannot deny the student access to their AT by stating that the educator doesn't know how to use or how to obtain it for the student. If the IEP team has made its determination, the school system is responsible for assisting staff in the use of the AT (IDEA 2004, Sec. 300.105). This indicates that an arts educator may require some training, for instance, when a student needs class materials in a digital format and the assignment must be uploaded into a particular folder in a software program for access during or after class. Staff familiar with the AT should be available to train IEP Team members regarding AT tools new to the IEP team. Many low-to mid-tech AT tools are quite intuitive and easily integrated into the classroom. When high tech solutions are considered, it is imperative that all educators' needs, including accessing and training on the AT tools, are met in supporting the implementation of the AT with the student(s). Students skilled in self-advocacy can be also instrumental in training their arts educators on the student's specific AT supports.

Educators of the arts who are not on the IEP team may find it difficult to determine whether the student's IEP requires AT, as the AT may be embedded into multiple areas of the IEP. Art educators unfamiliar with where and how AT is specifically written into student's IEPs will need support from IEP team members to learn how to read the IEP for AT information. Certain schools use digital IEP software programs with a condensed "IEP at a Glance" page that highlights the most significant aspects of the student's strengths and challenges, including that AT has been identified for this student. This summary assists the arts teacher in determining whether the AT would be necessary for their class. Other computer programs for students' IEPs may also put the most significant information on the Present Level of Functional Performance (PLFP), which is a snapshot of the student's present functioning, including the student's use of AT throughout their school day. Collaboration with special education teachers informs the arts educators that a student needs particular access to AT in the arts class, and supports the steps necessary for increased implementation of AT in the arts classes. If the required AT is not readily available to the student in the arts classroom, its necessity in the arts classroom should be reassessed. The AT may not be required during direct arts education instruction, but supports needed to complete assignments from the arts classes may be required in other learning environments such as in the other classrooms, library or computer labs. Determination of all the necessary locations for students to utilize AT to complete cross curricular tasks such as writing assignments should occur during IEP meetings between all educators working with the students.

Since arts educators are not always available to be the regular education representative on the IEP teams of all their students, information regarding students' AT and IEP needs must be transferred to them via other team members or sought online in digital IEPs. It is required by law that all educators be aware of students who have IEPs and of the supports needed, but that can be an almost impossible task for arts educators, who may have hundreds of students with IEPs. It is encouraging to note that due to the inherent nature of the arts classes, many students' needs for kinesthetic, auditory, visual and other engagements are addressed as due course during these classes. Considering a universal design approach to the

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overall environment of the class can also reduce the arts educator's concerns about how to accommodate numerous individual IEP requirements. Most times, providing various means for all students to access the tasks of the arts classes includes strategies that may be specific to multiple students.

Because arts educators cannot always be present at IEP meetings, it is critical that a collaborative group dynamic be established—one that recognizes the importance of the arts teachers' roles and contributions. Trust and respect are critical to ensure everyone's input is considered, including the student's. Successful collaborations work diligently to embrace the individual team members' strengths and challenges in developing and implementing IEPs, especially when considering AT. If members are not present to discuss student issues with the entire team, they depend on the other members to speak for them. Team members need to feel that their input is valued and respected at all times, whether they are present or not. Ideally, another team member attending the meeting can visit the arts classroom and observe to better present the arts educator's perspective at the IEP meeting.

When the arts teacher feels that the IEP Team has made decisions without consideration of the unique attributes of the arts classes, the art teacher may feel that the decisions have been imposed upon him or her, and this disrupts the team's cohesiveness. Trust and respect can be diminished, impacting future interactions. Resistance to strategies, support or continued collaboration can quickly break down the entire process, not only for one student, but potentially for many more students. The IEP team leader (usually the special education teacher) must be astute in recognizing and valuing the input of all team members.

Parents are also integral members of the IEP team. When parents feel that the IEP team is working together well, they trust that the team has their students' interests in the forefront. Too often, it has been indicated that some parents are not confident in their child's IEP meetings when they feel the IEP team is not in confluence with each other. Developing trust and respect for successful collaboration takes effort and skill, and continuously needs to be monitored.

Most times, all persons working with the student are not present for the actual meeting, but are requested to give input into the student's PLFP (Present Level of Functional Performance) for inclusion in the IEP. In this way, an arts educator may offer behavioral and academic present levels of performance in the arts classes that the special educator adds to the IEP. This information may be shared via a request (in person, email, school mailbox, etc.) from the special education teacher as students' IEPs are being reviewed. The request may be a specific set of questions to answer, a basic request for information about student functioning in class, or for specific information to support the students' strengths and challenges. If ongoing collaboration is a function of the IEP team, there is a good chance that if there is AT in the student's IEP that may impact upon the arts classes, it has been addressed with the arts educator.

Ideally, collaboration with the special educator early in the IEP process or the beginning of the school year can keep the arts educator from struggling to reinvent the wheel and frustrating the student. Not every student with an IEP will require AT, and the AT required by one student may be useful for other students as well. As an arts educator becomes familiar

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with how AT can be integrated into their curriculum, it can be expected that potentially AT would become an integral part of the arts educator's curriculum. There are many arts related software programs, apps for various devices, and other technologies that arts educators can also bring to the collaboration that would benefit the other members of the IEP team. Collaborating and sharing knowledge that all can use enhances the opportunities for the IEP team and students with disabilities alike.

### The SETT Process

Consideration of assistive technology for students in the arts can be accomplished by utilizing the Student, Environment, Task, & Tools (SETT) Framework developed by Joy Smiley Zabala, which is a systematic approach used by the IEP team, parents and the students themselves in structured meetings. The SETT Framework is a four-part model intended to promote collaborative decision-making in all phases of assistive technology service design and delivery, from consideration through implementation and evaluation of effectiveness (Zabala, 2005). This framework has become the mainstay in the consideration of assistive technology for students with disabilities around the world. The framework components, specified here for arts classes, are

**The Student.** The SETT Framework is designed to individualize AT for students referred for potential AT supports. When considering the *Student* part of the framework, the student's strengths and challenges are discussed. Indicating what the student is already capable of accomplishing independently or that which may need some support is critical to the process of considering AT. There are times when the student's strengths and challenges are more pronounced during particular activities or settings, so input from all involved in the students' functions--from school to home--are vital. Often, a students' strengths may help to determine a support that can be uniquely chosen to suit their abilities, thus making the challenges less involved. By discussing the student's strengths and challenges, the IEP team gets a fuller picture of the student than that which they may have based on only in their own experiences. When the team builds understanding of the student they better understand the continuity and challenges between settings for better individualization of AT.

**The Environment.** In the SETT framework, the *Environment* component challenges the team to look at the various environments where the student will be engaging in the activities--classroom, arts room, music, etc. As mentioned previously, the student may have different needs in different environments, so some AT supports may be limited to certain situations. The environmental consideration takes into account transitioning between classes, such as going to the art and music classrooms, as well as going to and from home.

**The Tasks.** When considering *Tasks*, the team analyzes the tasks and activities that the student will be expected to do throughout the day. Are these tasks occurring in one or more classes? Are the tasks independent or group based? The student may not need AT when in a group experience, but may need it when working independently. How might this affect the student's ability to function with that task? What tasks are specific to which classes? For example, a student may be asked to write a paragraph in one class, and then be asked to write

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a reflection on a piece of music he heard in music class. What are the challenges in this task for the student? Task Analysis is a strategy for understanding nuances in potentially complex tasks. This strategy breaks down what may be perceived as one simple task into a flow of many smaller tasks. The student may be able to do most of the composite tasks of writing (ideation, understanding sentence and paragraph structures), but might be unable to spell the specific words they want to use, so the task doesn't get completed. Another example of a task that can be considered across the curriculum is to the physical task of writing. From the perspective of functional movement, this task involves grasping tools, fine motor skills, and other physical skills. This task requires a solution that can cross other tasks and curriculums throughout the student's day.

**The Tools.** Once tasks are identified, *tool* ideas can be generated independently by members or as a team. Team members often independently seek tool ideas for tasks and bring them to the IEP meeting for group consideration. As the team looks at tools the student may require to access, engage with, and complete various tasks throughout the school day, information about potential AT supports for trial with the student or for immediate implementation are shared. Otherwise, if there are no apparent solutions, the IEP team may need to explore additional options based on all the previous fact finding in the earlier part of the framework.

Since assistive technology is somewhat new to the arts and is oftentimes very specialized, there may not be an obvious, immediate solution. In the previous example of writing a paragraph, a tool may be the use of a computer with speech to text software for the student to "speak" his writing task. By articulating their thoughts aloud, the student may be able to complete the task at a level of competence that eluded him due to the poor spelling skills. The school could dedicate a computer to the student that would travel with the student during the school day, and possibly also be used at home. This strategy can be used across the curriculum for the student's success throughout the day. An adapted gripping device could be used to support physical access to writing, drawing and playing the drums, which would enhance the student's ability to be as independent as possible. When the IEP team collaborates to consider all the student's needs in all their classes, the student benefits on multiple levels.

The SETT framework is a process for considering AT for students with disabilities. Although it may appear that there is a specific order to the information gathering, it really is a fluid process that should reflect the student's present functioning at any given time. Flexibility provides opportunity to revisit any aspect to better develop most appropriate solutions as a student develops or regresses. As IEP team members observe notable changes in the student, such as increased or decreased independence on a task, it is important to share these new observations and potential solutions with the team. From there, a new composite of the student is created from which the entire team can develop best practice strategies and implement AT as required. By actively engaging in this process across disciplines, a greater understanding of the individual class expectations can help all involved collaborate at a deeper level. A form that will guide the IEP team participants through the SETT Framework process is available at [http://www.joyzabala.com/uploads/Zabala\\_SETT\\_Scaffold\\_Consideration.pdf](http://www.joyzabala.com/uploads/Zabala_SETT_Scaffold_Consideration.pdf)

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## Integrating AT in Arts Classes

Arts educators may see many more students than regular education and special education teachers, and often they do not have the time to fully read each student's IEP to determine who requires assistive technology. Through collaborations, special and general educators become more familiar with cross curricular tasks such as reading and writing in addition to tasks specific to the arts classrooms. From years of this author's experience, increased awareness of the similarities and differences of tasks between the various classes leads to a more global and unified approach to the consideration of AT for students with disabilities. When AT is considered for a task, the best IEP teams reflect on how that AT impacts not only the student, but every other educator with whom the student interacts. If the arts educator isn't in attendance at the IEP meeting, the student's special education teacher can inform them regarding any specialized AT that may require training or acquisition. From gripping an art tool or instrument to communication in verbal or written formats, there are many tasks in the arts classes that could require AT. Collaborating with special educators about expectations in the arts classes can help the arts educator to understand how to consider AT for their classes. A shift in thinking about how to deliver content and accept student responses helps the arts educator look at AT as another tool for student engagement and success.

Collaboration also involves the arts teachers and special education teachers to determine AT that is only specific to either class. Many special education classes do not need to use the same kinds of materials or tools that arts teachers do, and conversely, many arts classes do not need such devices as talking calculators. It isn't always the special education teacher who shares the information with the other staff, it can be the OT/PT/SPL and support staff working with the student. When it is difficult to collaborate onsite together, everyone involved needs to look at creative opportunities for communications.

The key to successful assistive technology implementation is encouragement from the educators for its ongoing use in order to provide students with easy access to the curriculum. It should be as readily available as any other learning tool in the classroom. Of course, arts educators may have concerns about how their role in implementing AT includes teaching reading and writing using these tools. The art educator's role shouldn't be to teach the students how to read and write, but to support the students' access to the AT in the arts curriculum to be able to read and write in all content areas. Arts educators need not know how to use all the software programs that the students need, but should be aware of the specifics of their use by individual students and be able to encourage and support the use of those tools. If the student needs to be taught how to use the specific reading or writing programs for access to the arts curriculum, the student can be referred back to the special education teacher for further training on the device or program. Additional resource opportunities for the students to get help with the use of AT are other support staff such as librarians, paraprofessionals, educational assistants, or other tech staff who may be also trained in the use of the AT for the students.

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### Using AT across the Curriculum

If the student is successfully trialing or using assistive technology in other academic classes, it should also be considered for use in the arts classes. Once the IEP teams know many tasks, including reading, writing and communication tasks, cross all classes, AT can be successfully implemented throughout the student's daily classes, including the arts classes. Overall, however, it seems reasonable to suggest that art teachers need more training on AT that can increase meaningful participation for students with significant disabilities. Additionally, special education teachers, who often take an AT course, may need more training in how to collaborate with art teachers and paraeducators so that AT devices gain more widespread usage in the art classroom (Coleman et al., 2015).

From the perspective of the arts educator, the potential impact of AT on teaching can be very daunting or very exciting. Not only do arts teachers usually see a wider range of number of students per class, ages, and disabilities than other educators, but they often are physically traveling within school buildings and even between school buildings weekly, if not daily. Expectations for students vary by grade level, school, and capabilities. Some arts educators only see the students for a short time (maybe 30-50 minutes), usually once a week with little opportunity for additional time to work on specialized interventions. This schedule can make it difficult to confer and collaborate with the other teachers of the students. When arts educators are actively engaged in the IEP process, the students can benefit immensely; if they are not part of the IEP process, they will need to collaborate with the special education teacher or other specialists. A simple, yet effective strategy is to ask the special education teacher providing a list of the students in their classes with special accommodations, modifications and AT requirements for the arts educators. This can be communicated via email, other electronic formats, or teachers' individual mailboxes. Confidentiality must be ensured to protect the students, so educators need to be responsible in appropriately identifying students in communications between the educators.

As many educators are aware, arts classes provide opportunities for students with disabilities to demonstrate success in way different from how they are assessed in their academic classes. Many arts educators have said that they didn't realize that some students had challenges as described in their IEP because the tasks and activities in the arts classes require different skills. Due to the hands-on and expressive learning opportunities in arts classes, disruptive behaviors can be diminished, artworks independently created, and a student's singing may be heralded as the best in the class---all these examples are evidence of the power of the arts for students with disabilities. Arts educators can be great problem solvers, creative thinkers, and supporters of inventive options. So, from that perspective, AT can be considered an additional learning tool for arts educators to add to their ever-growing repertoire.

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## Collaborating for Learning, Problem Solving, and Strategizing

Collaborative strategies are integral for bringing persons together regarding a task or issue. Furthermore, as Gardner states, “Collaboration is an intricate concept with multiple attributes.” (2005, para.4). Attributes of collaboration include sharing of planning, making decisions, solving problems, setting goals, assuming responsibility, working together cooperatively, communicating, and coordinating openly ([Baggs & Schmitt, 1988](#)). There is no one specific process for collaboration, and each group seeking to collaborate must find their own ways of working through how to best collaborate within their own situation. One does not need to always have scheduled meetings, as sometimes a spontaneous moment caught in the hallway can be just enough to keep the ball rolling. Other teams need to have specific deadlines and task identification for individual and group success. Each team needs to determine how best to “play nice” when collaborating on their student’s behalf.

Like special educators, arts educators may or may not have training in the use of assistive technology supports, especially in the arts. Some school districts have access to art or music therapists or adaptive art or music specialists, and these professionals can be sought out for individual or group class support. Unfortunately, some of these specialists are primarily trained for therapeutic interventions and not well versed in assistive technology. But most importantly, collaborating with other staff within one’s own school and school district will bring about the best results, as the persons involved understand the nuances of the educational system in which they work. Continued consideration, trialing and implementation of AT specific to the arts needs to be an ongoing component of a fully comprehensive arts education program for students with disabilities.

Collaboration on multiple levels is vital. Educational staff are often brought together to collaborate on specific issues that are usually time-specific. Many times, the IEP team is not brought together by choice, but is brought together out of necessity to convene those directly working with the student. It is assumed that all involved have the professional qualifications and behaviors that will help to make the process efficient and effective. What often isn’t taken into consideration is personalities, hierarchies of years of practice, new practices, and open minds to work toward a unified goal for the student. Friend and Cook (1992), describe the collaboration process in terms of equally shared resources and responsibilities among professionals working on a common goal. Considering assistive technology is a time consuming and reflective process that is usually led by the special educator or special education supervisor. When the leader of the team has the skills to delegate, listen, reflect and support a diverse team, the ongoing process of planning and implementing AT for students with disabilities can be an effective process. It is when the team develops conflicts that the process becomes less effective. It is important to note that critical members of the IEP team are the student and parents/guardians, whose engagement in the process can potentially come from more of a passionate, emotional/familial place than from the more educational place that the rest of the other IEP team members. Collaborating on multiple levels, between special and regular educators, between educators and support staff, between parents/guardians and educational staff, and between supervisory and educational staff can create unique relationships that can manifest themselves throughout the consideration process and subsequently the AT implementation process.

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Students, especially those with disabilities, interact with many teaching staff members on a daily basis. Teaching staff, including teachers, assistants, therapists and specialists also interact not only with other staff, but also with many students. The greatest challenge for collaboration in schools appears to be the time necessary for any collaborative efforts. Scheduling conflicts with itinerant and in-school staff due to the volume of students to be considered, as well as daily obligations, should not completely shut down any process of working together. With a little bit of creativity, finding ways to collaborate regarding student information, acquisition of equipment and ongoing implementation can bring about the students' and staffs' success.

### **Conclusion**

In conclusion, the potential for collaboration between arts and special educators in the consideration and implementation of assistive technology strategies is critical to students with disabilities. More research and practice in the collaboration process within schools for successful implementation of AT in the arts is needed to ensure that students get the educational supports they need throughout their school day, including the arts classes. Arts educators need to be proactive in learning about the AT that the students have in their IEPs, and special educators must include arts educators as valued members of the students' IEP team.

Ongoing implementation of AT throughout a student's day and school career continues to be a difficult challenge for schools. Knowledge of AT, how to acquire funding for specialized equipment, and ongoing consideration of AT strategies are not skills that educators in all curricular areas possess.

There are many creative ways of implementing assistive technology supports into all classrooms, including the arts classrooms. Arts educators interested in furthering their knowledge in this area are encouraged to seek out more information on assistive technology. There is increasing interest in developing support material online for arts teachers interested in UDL, assistive technology, and adaptive strategies for the arts. Successful collaborations bring out the best opportunities for the students to engage and be creative in the arts classrooms utilizing assistive technology.



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# Self-Representation and Empowerment: Preservice Art Educators and Adult Learners with Autism

MICHELLE KRAFT

**ABSTRACT:** *As community, the art classroom serves as a relational site through which students and teachers recognize themselves and others—how they belong or are excluded—as a function of self-embodiment within environment. This study shares one model for a collaborative field experience between university students enrolled in an art pedagogy course and adult students at a regional transition academy for autism. The study combines phenomenological and action research methodologies to investigate how opportunities to work alongside adults with autism affected preservice art educators’ perceptions of creating inclusive visual art classroom environments. In keeping with disability studies concerns, participants used dialogic approaches to promote a classroom climate of community contribution and empowerment and to explore personal attitudes toward inclusion of difference. The concept of empowerment through difference, using self-representation, was a concerted part of preparation, planning, and lesson design. Through their participation in teaching and working alongside adult learners with autism, the preservice art educators increased in their levels of comfort in including difference in their future classrooms. They gained confidence in their abilities to attend to and facilitate meaningful learning experiences that provided for full participation of all learners, recognizing their own role as educators in mindfully cultivating classroom communities.*

## Discomfort with Disability

Teacher attitude and perception are important factors to creating truly inclusive classrooms as envisioned by special education law; but many feel uncomfortable in working with difference (Benin & Cartwright, 2006; Derby, 2011; Individuals with Disabilities Education Improvement Act (IDEA), 2004; Kraft & Keifer-Boyd, 2013; Reid & Knight, 2006). This unease is due in part to the lack of exposure available to undergraduate students, through field experiences, in working alongside individuals experiencing moderate to severe disabilities within the unique setting of the art classroom (Allison, 2008; Kraft & Keifer-Boyd, 2013). Disability studies art educator John Derby (2011) points out that at least some of the discomfort with disability stems from the notion that everyone has the potential to become disabled, a fact that separates disability from other minority identities (see also Blandy, 1991; and Chivers, 2001). Research indicates, however, that our levels of discomfort may be mitigated through opportunities to encounter and build relationships with those who are different from us. Using empowerment-by-difference as a critical lens for participatory action research enables us to redefine difference, facilitating transformation of sociopolitical policies (Kraft & Keifer-Boyd, 2013). This includes rethinking how we prepare preservice educators to foster inclusive classroom communities that embrace and empower students of all abilities (Allison, 2008; Keifer-Boyd & Kraft, 2003).

This study shares one model for a collaborative field experience between university students enrolled in an art pedagogy course in fall 2015 and adult students at a regional transition academy for autism. The study combines phenomenological and action research

methodologies to investigate how opportunities to work alongside adults with autism affected preservice art educators' perceptions of creating inclusive visual art classroom environments. As action research, this study involves systematic inquiry that is field-based, during which I reflect upon the teaching practices that are embedded within the research process (Klein, 2014); the practice of teaching and the research are intertwined. In designing the field experience, we adopted a disability studies stance. Through this theoretical framework, preservice art educator participants used dialogic approaches to (a) promote a classroom climate of community contribution and empowerment, reflecting upon teaching/learning outcomes to facilitate full participation; (b) attend to evidences of empowerment honoring disability voices; and (c) explore personal attitudes toward inclusion of difference.

### **Including Disability in the Dialogue**

The disability studies movement has gained traction as communities (including art classroom spaces) seek ways to respect the experiences and voices of those who are different from the perceived norm. The movement emerges from within the disability community itself and examines power structures that privilege certain bodies and neurologies over others. For example, architecture and curriculum may allow for some to navigate freely while creating disabling barriers to others (Derby, 2011). Disability studies points out that the language we choose to adopt, how we arrange our educational spaces, and our expectations of people shape what we accept as normal. When we perceive disability as an insufficiency inherent within another's personhood, focusing on the individual as the disabling factor, we cannot explore what it means to live in a truly inclusive world. Alice Wexler (2009) suggests that it is the dominant ("abled") group that considers itself "normal" and therefore defines disability; the neurotypical feel comfortable participating within the expectations of the social structure that they've devised. Because they have defined the norm, they may unwittingly perpetuate deficit judgments of difference, which result in stereotypes, discrimination, and marginalization, thereby excluding self-representation and full participation of those students who are disabled. The neurotypical may accommodate and compensate for disability without necessarily understanding or respecting that an individual's identity is formed by difference.

### **Enabling Educational Environments**

Considerations for inclusive educational spaces encompass not just the physical environment of the classroom but also issues related to curriculum and assessment for student learning. As community, the art classroom serves as a relational site through which students and teachers recognize themselves and others—how they belong or are excluded—as a function of self-embodiment within environment. Edward Casey (1993) reflects upon the intimate connection between body and space in determining not just where one is physically but also who we all become together, as community. The principles advocated by universal design for learning (UDL) provide a helpful approach in rethinking the disabling conditions of our educational environments and allowing for including difference in participatory ways. Universal design is rooted in architecture and product design, and seeks ways for creating spaces and products for a diverse population that includes the aged, young children, different body types, impairment, and varying cognitions and perceptions. UDL works to apply these

same philosophical approaches to student learning by recognizing the diversity of humanity in educational spaces (CAST, 2015; Malley, 2014). UDL approaches attend to the multi-modal learning capacities of all students within our built environments and within curriculum and instruction. These strategies offer avenues of full participation and self-representation for all learners in the art class community.

### Recognition Through Dialogue

Dialogic approaches to inclusion argue that continuous communication is required for recognition and to prevent suppression of marginalized voices, understanding that one cannot presume to speak on behalf of the experiences of another. This project design included a paradigm of transformative power in education, through authentic, dialogic approaches that go beyond what Paolo Freire (1970) refers to as a “banking model” of pedagogy, in which the teacher deposits knowledge into the minds of passive students. Rather, we used continuous communication (between preservice art educators and the instructor and between the preservice art educators and the adults with autism) to promote a classroom climate of unity and cooperation. The university students in the senior-level art pedagogy class adopted a purpose and focus of empowerment-through-difference. We used combined theoretical perspectives of communitarianism, which values all members of the community and sees community members as interdependent (Kraft & Keifer-Boyd, 2013; Turnbull, 1991), along with dialogic-neuro-cosmopolitanism. The latter emphasizes a commitment to dialogue, a respect for difference, and an attitude of purposeful defamiliarization, or estranging oneself from what is considered culturally familiar to overcome rigid expectations of normal (Savarese, 2013). In this way, we recognize that the alternate neurologies represented by autism may demonstrate different ways of knowing that are not inherently worse or better than others.

Important to the curriculum design for the field experience was the concept of self-representation through choice-making. Wexler (2009) suggests that the materiality of art-making facilitates creation and re-creation of self in relation to the world: the action of shaping and forming materials brings awareness to our living bodies as we act in relation to those materials. In this way, we become conscious of self as we choose, respond, and form; art leads to self-knowing (Wexler, 2009). Each art lesson for the field experience was designed with choice-making and self-representation as important components, and university students continually reflected upon evidences of various modalities of knowing and perceiving represented by the differing neurologies of the adults with autism.

### Methodology

In order to evaluate the effects of this field experience on the comfort levels of preservice art educators, the field experience was embedded in a larger university art pedagogy course devoted to issues surrounding the inclusive secondary art class. Combining action research and phenomenological methodologies allowed me to investigate preservice teacher attitudes, lesson development, and teaching within the particular setting of the university art pedagogy class’s field experience teaching the students from the autism transition academy. The research project design included built-in periods of debriefing and

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reflection within the university class with the preservice art educators; this occurred before and after we began the field experience, as well as between each of the field experience teaching sessions. As a function of action research, these periods allowed for intervention and change in student teaching and in my own educational approaches in readying university students for their teaching experiences. This process enabled preservice art educators to respond to their teaching as functions of a least restrictive environment that was dialogic, community-building, empowering, and fully participatory.

### **Research questions that guided the study included:**

1. Can participation in a field experience, teaching art lessons to adult students with moderate to severe autism, increase preservice art educators' comfort levels in facilitating inclusion?
2. What role can field experiences play in helping preservice art educators create art classroom communities that are fully participatory and inclusive of students experiencing disabilities?
3. How might lesson plan/curricular development empower students through difference, and how might consideration of different neurologies help art educators to include difference?
4. What strategies for universal design for learning (UDL) are included in planning for the specific population of learners for this project?

Because of the limitations presented by the university course format (e.g., curricular needs and time constraints), the embedded field experience was not intended to emulate an inclusive public school art classroom per se. Rather, the intent was to allow the space for participatory art pedagogy within a community of learners experiencing moderate to severe disabilities. Many of these learners were of similar chronological age to the university students. For preservice art educators, working alongside members of the autism community facilitated dialogue and friendship-building and supported forging a classroom community that promoted self-representation among all students. Self-representation gives voice to one's personhood and to one's firsthand experience of disability, providing a means for displacing disabling stereotypes. The hope was that preservice art educators take (and generalize) their experiences of recognition, full participation, and empowerment-through-difference into their later PreK-12 art classrooms.

### **Preservice Art Educator Participants**

Research participants included upper level preservice art educators enrolled in an upper level art pedagogy course that met Tuesday and Thursday mornings during the fall 2015 semester at a small, private university in the Southwest. As a function of the class, which focused upon issues related to including difference in art, the preservice art educators worked in pairs to create lessons in which the art historical/art-making focus was work by an artist experiencing a disability. The university students then taught these art lessons to adult students on the autism spectrum.

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There were seven junior- and senior-level university students enrolled in the art pedagogy course, and all were majors in all-level art education. Three of the students were males, and four were female, and they ranged in age between 20 and 46. Four of the students were also enrolled in the methods block (the semester prior to student teaching) in fall 2015, and all had been enrolled in prior education courses that had included field experiences in traditional K-12 classrooms that included students with mild to moderate disabilities. None of the university students had worked extensively with students experiencing moderate to severe disabilities, including autism.

### **Procedures for Data Collection**

Data collection included my participant observer field notes, preservice art educator responses during reflexive debriefings and planning periods in response to and in preparation for their teaching sessions, and formal and informal emergent interviews with preservice art educators (both written and oral). I also collected artifacts, such as university students' lesson plans, photographs of artworks by adult learners with autism that resulted from the classes, and photographs and learning assessments from the final exhibition at the end of the field experience art lessons. I also collected preservice art educators' reflective responses to their own learning, which were aligned with the research questions for the project.

I analyzed and interpreted these artifacts and responses for evidence of preservice educators' teaching related to inclusion and full participation of learners with autism in an art class setting. Consequently, I considered instruction and assessment, UDL and other inclusion strategies, evidence of dialogic community building toward empowerment, and preservice art educators' own comfort and adaptability in working with learners with moderate to severe autism. The combined approaches of phenomenology, ethnographic methods, and action research yield a rich picture of the preservice field experience.

### **Examining Disability in the University Art Pedagogy Course**

Preservice art educators worked in pairs to design and teach a series of art lessons to adult learners who attended a transition academy for autism. We called this art-teaching/field experience component of the course HEARTS, for Human Empowerment through the ARTS; the field experience was, in some ways, modeled after a similar HEARTS program first offered in summer 2001 (Keifer-Boyd & Kraft, 2003; see also Kraft & Keifer-Boyd, 2013, which served as the textbook for this university course). The 2015-16 HEARTS differed from the original in that (a) it included the additional theoretical framework emerging from the disability studies perspective, with an emphasis on dialogic approaches and self-representation; (b) the scope of the 2015-16 field experience was more condensed; (c) we used the new National Core Arts Standards and attendant resources and strategies for including disability; and (d) we focused upon adults with autism specifically. HEARTS sessions took place four times, in 2-hour blocks during the final weeks of the art pedagogy course. We used class meetings between HEARTS sessions to debrief and strategize on past and upcoming HEARTS. The four HEARTS art lessons—two of which took place at the university art studio and two at the transition

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center for autism—included: (a) clay power masks, (b) where-I'm-from collages, (c) synesthetic paintings of music, and (d) expressive self-portraits using oil pastel-watercolor resist; there was an exhibition of artwork at the end of HEARTS. Each HEARTS meeting included 15 to 18 adult students.

Prior to the field experience, the university art pedagogy class prepared for HEARTS by: (a) reviewing special education law (both federal mandates and case law interpreting the mandates); (b) studying the National Core Arts Standards and UDL curricular and environmental strategies for including all; (c) learning from resources, such as the Autism Speaks website, videos like *Understanding Autism: A Guide for Secondary School Teachers*, and VSA Webinars; (d) examining portrayals of disability within film and other forms of visual culture (Keifer-Boyd, Kraft, & Hicks, 2015); and (e) collaborating with the special educators from the transition academy. Preservice art educators engaged in a multi-step lesson planning process that considered the learning needs of our specific learners and revising plans based upon feedback from the class and in consultation with the transition academy special educators. As an art historical/thematic focus for each of the four HEARTS art lessons, preservice art educators studied artists experiencing various disabilities, including autism. These artists were Ahmet Ustunel, a ceramics artist who is visually impaired (for clay power masks); Marilyn Cosho, who works in a variety of two-dimensional media and is on the autism spectrum (for the where-I'm-from collages); Zachary Inkeles, a painter who is on the autism spectrum (synesthetic music paintings); and Vincent van Gogh, who suffered from mental illness, substance abuse, and a seizure disorder (for oil pastel/watercolor resist expressive self-portraits).

As we designed the lessons and class activities, we especially considered issues related to empowerment through self-representation. Throughout the weeks of the field experience, between each teaching session, university students engaged in continual reflection on the process of teaching and learning, giving attention to UDL strategies for setting, space, instruction, assessment, and exhibition, as these applied to our particular learners. The preservice art educators also created guided, written reflections on the effectiveness of their own teaching/learning outcomes, empowerment through difference, evidences of neuro-differences versus neuro-typical expectations in teaching and learning, and their own attitudes toward inclusion of students with moderate to severe disabilities in their future art class communities.

### **Outcomes: Empowering Self and Others**

In seeking ways to create a classroom environment for HEARTS that included differences in a fully participatory way, the university class critically examined stereotyping portrayals of disability in visual culture, especially in film. Investigating and questioning portrayals of disability in visual culture allowed us to examine our own assumptions regarding the adult learners with autism and to compare those assumptions to the reality we found in the field experiences, addressing aspects of research questions 1 and 3. These preliminary investigations allowed us, as well, to consider our educational approaches for empowerment through difference to facilitate the adult students' own self-representation, found in research question 2 and 3. This section reviews the outcomes of the research project through the original four research questions.

### **Disabling Discomfort:**

***Can participation in a field experience, teaching art lessons to adult students with moderate to severe autism, increase preservice art educators' comfort levels in facilitating inclusion?***

Research question 1 addressed whether participation in a field experience working students with autism could increase preservice art educators' comfort levels in facilitating inclusion of learners with moderate to severe disabilities. Going into the field experience, the preservice art educators expressed varying degrees of comfort working with students with moderate to severe disabilities, depending on the extent to which they themselves had family members or friends who experienced disabilities. All of them acknowledged some trepidation about including difference in their future art classes in some specific way, citing "lack of experience," the need for modifications to teaching through "alterations and adjustments which would be essential for everyone to properly learn," or simply "extreme" discomfort or "fear" of the "unknown." One preservice art educator, Audra (all students' names are pseudonyms), explained that in a previous elementary school observation experience, "Assistants came into the classroom with the [students with disabilities]. They had separate work from the rest of the class . . . I really didn't feel comfortable at all working with students with disabilities." She compared this recollection to her initial reaction to meeting the students from the transition academy: "I remember the first time they came into our classroom [at the university], I didn't know what to do or say. I initially felt very awkward and out of place" (Personal communication, December 5, 2016).

During HEARTS, several preservice art educators noted how their own assumptions of the students' abilities had been erroneous. As the university students progressed through HEARTS, they came to know the adult learners' capabilities and preferences, adjusting their lesson plans to respond to these. For example, in gathering materials for the where-I'm-from collages, preservice educators sought out pictures, clippings, and materials that reflected what they had learned about the adult students' interests and experiences. The university students planned their organization and preparation of art materials and procedural steps to attend to what they had observed of the adult students' capabilities, physically and cognitively. In addition, the university students recognized their own problematic uses of language. Several mentioned realizing that they had been condescending, or "talking down to," the adult learners, noting how they adjusted their language, tone, and approach in light of these recognitions. Miranda admitted:

Although I have been in situations where I have had to be supervising over a group of students, and some of them were non-typical students, I had never experienced students in a group *all* experiencing some disability. My comfort level was, and is with most people, relaxed, but it was through this experience [that] I learned just how many walls and barriers I had for myself in teaching [students with disabilities]. (Personal communication, December 6, 2016)



By the end of the HEARTS experience, all of the preservice art educators reported that their levels of ease in working alongside individuals experiencing disabilities had increased, as had their confidence in including students with disabilities in their future art classes. The university students reflected upon their change in outlook as “night and day,” as moving from “fear of the unknown within myself” to “a level of quiet understanding and confidence,” both with “a collective group of students but also . . . one-on-one.” This increase in comfort with difference among the preservice art educators mirrors the results of previous studies that also have demonstrated the value of field experiences for preservice educators in working with disability (Allison, 2008; Kraft, 2001; Guay, 1994).

### **Creating Community in the Art Class:**

***What role can field experiences play in helping preservice art educators create art classroom communities that are fully participatory and inclusive of students experiencing disabilities?***

The second research question addressed the role of field experiences in helping preservice art educators create participatory and inclusive art classroom communities. In reflecting upon how community was evident within HEARTS, more than one of the university students pointed out that the adults from the autism transition academy already shared community among themselves. We were the outsiders seeking admission, working to create a new relational space through our art lessons. Preservice art educator Caleb pointed out, “I did find community within them, and we began a new community with all of us together” (Personal communication, December 5, 2015).

Attention to development of interactive instructional activities that facilitated discussion and cooperation, continual monitoring of and engagement with students as they worked, rearrangement of classroom spaces for both UDL and cooperative considerations, and collaboration among stakeholders helped to facilitate community-building in HEARTS. In the university course, we had talked about collaboration between art educators, special educators, paraeducators, parents, and students in serving the needs of students with disabilities and in creating community in the art class. The preservice art educators, through the HEARTS program, engaged in collaboration through preparatory discussions with the director of the transition academy and through preliminary visits with the adults with autism (both at the academy and the university). Our planning discussions with each other, transition academy special educators and paraeducators, and with the adult students with autism during the HEARTS lessons further facilitated collaborative efforts. Preservice art educator Miranda recalled the alterations she and her teaching partner made to their lesson plan to accommodate learners’ needs that arose from these types of discussions, adding, “A paraeducator made me more aware of how the education system, while needing some adjustments, is only as successful as we [teachers] allow it to be” (Personal communication, December 6, 2015). By engaging university students in opportunities to collaborate with stakeholders toward participatory inclusion while they are still preservice educators, we lay the foundation for such collaborations after the students become K-12 art educators. Such cooperation among parents, students, art educators, special educators, and paraeducators allows these stakeholders to share important knowledge that can prove helpful in designing

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educational interventions, as well as in reporting the progress and providing feedback resulting from these interventions (Kraft & Keifer-Boyd, 2013).

As the preservice art educators worked in pairs to design their lessons, they also considered themes and approaches that emphasized self in relation to others. For example, with both the synesthetic music paintings and the power masks, the university students led discussions relating to expression and mood and how facial expression communicated power and emotion to those around them, while examining numerous art examples. With the music paintings, the class listened together to various instrumental pieces of music, pointing out which qualities (pitch, tempo, rhythm) lent mood to the piece. Students looked at examples of color in art, associating hue and intensity and value with emotional qualities. Marcy, one of the teachers of that lesson, noticed some students' responses to expressing their own emotional responses to the expressive qualities in the music *and* in relation to what else was happening in their own lives:

The music really helped to prompt . . . feelings. I saw one student paint a fist because he was angry about not being able to beat a level on his video game. Another student, instead of smearing paint like she usually did, applied stippling to her canvas to match the tone of the music. [See Figures 1 and 2.] By acknowledging their feelings, [the students recognized] that it's ok to get emotional. (Personal communication, December 5, 2016)

**FIGURE 1.** Synesthetic music painting by adult learner with autism, example 1



**FIGURE 2.** Synesthetic music painting by adult learner with autism, example 2



Marcy understood that the nature of autism meant that often, the students with autism may be in conflict with overpowering emotions, but added:

By painting their emotions, the students were able to talk with and understand one another better; there were a couple of instances of “hey, I feel that, too.” It helped create a sense of belonging for these students to know that they weren’t alone in what they were feeling . . . I believe this approach to emotions was beneficial as well as empowering” for the students. (Personal communication, December 5, 2016)

Wexler (2009) discusses both color and music as multi-modal, sensory ways of exploring memory (and thereby, identity), noting that the creation of art experiences that stimulate varied sensory systems elucidates the variety of ways in which humans perceive the world around them. Marcy’s comments evidence awareness—in both her own teaching and in students’ creative work—of the relationships between art and individual experience and between the self and community. When preservice art educators like Marcy reflect upon their personal teaching practice and actively observe and record student learning outcomes arising from instruction, they are able to respond to their students’ educational needs by adjusting and modifying instructional strategies. They can share their assessment observations with special and paraeducators, creating effective interventions collaboratively.

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It was the final exhibition of HEARTS artworks that made our art community most apparent. The exhibition, held in the university art galleries, was a community collaboration among transition academy students and personnel (who created the invitation posters, promoted the event, and created the artworks) and the preservice art educators (who taught the lessons, installed the exhibition, hosted the reception, and promoted the event on campus). Attendees included the adult learners with autism, educators from both the transition academy and the larger center for autism education and research, family and friends of the students with autism, the preservice art educators, and additional university faculty, staff, administration, and students. During the art exhibition, preservice art educators discussed students' artworks with them as a form of assessment and met their family and friends. Preservice art educator Veronica reflected that the exhibition engendered student confidence: "They loved seeing their work displayed and showing everyone who came by. The community setting of taking care of one another remained clear through pride and the way [adult student] Meg insisted upon guiding [another student] Nathan through the gallery" (Personal communication, December 5, 2015).

Caleb described his visit with one mother of a student from the transition academy who seemed particularly moved by her daughter Abigail's artworks. Regarding her self-portrait (see Figure 3), Caleb remembered his conversation with Abigail's mom. "Abigail had never been asked to draw herself. It may be the first time she really saw herself. Her mother was blown away at what she had drawn . . . Abigail was allowed to let her creativity show" (Personal communication, December 5, 2015).

**FIGURE 3.** Self-portrait by adult learner



Wexler (2009) says that "the body image is the mental picture we have of ourselves—who we subjectively think we are," adding "when art is made under compelling conditions, it strengthens the structure of self and creates a world, if only for a moment, outside the reach of external forces that thwart personal development" (p. 17). Abigail depicts her rounded frame centered within the picture plane, significant within her surrounding space through placement, coloration, and contrasting value from her surroundings. She is positioned so that she is reaching upward, actively moving; and she is surrounded by a colorful, swirling universe characterized by dynamic mark-making. Her representation of self seems far removed from stereotype; she has developed her own schema for imaging herself in relation to her environment and, by extension, to those around her, her community.

### Empowerment Through Difference:

***How might lesson plan/curricular development empower students through difference, and how might consideration of different neurologies help art educators to include difference?***

The third research question focused on how lesson plan/curricular development might empower students through their differences, as well as how considerations of different neurologies might help art educators to include difference. The concept of empowerment through difference, using means of self-representation, was a concerted part of our preparation, planning, and lesson design. Throughout HEARTS, we remained cognizant of the different neurologies in the classroom; we aimed to purposefully defamiliarize ourselves from our own ways of knowing in an attempt to appreciate the adult students' alternative ways of perceiving the world. The preservice art educators began to understand how fraught with mischaracterization and inaccuracy terms like “normal” could be in categorizing the breadth of disability as a factor of the human experience. For example, Paul explained, “I would say that this notion of ‘normal’ was highly misleading. I found, through the general public’s *idea* of ‘normal’ . . . I was truly blinded to the fact of understanding a certain uniqueness in each and every individual. By this I mean . . . that nobody is completely and utterly normal, and that is the simple beauty of it all” (Personal communication, December 5, 2015).

The preservice art educators, in attending to the neuro-differences of their students and the goal of empowerment, recognized the important roles of facilitating opportunities for substantive self-representation, of choice-making in art, and of considerations for personal experiences and preferences in art-making and the learning environment. Audra recalled her teaching partner Barrett, who was able to anticipate possible frustrations [in art lesson planning and preparation] of the [transition academy] students that he probably wouldn’t have had to think twice about with neuro-typical students. When we worked with oil pastels, Barrett made sure to look through the eyes of someone who lived with [a tactile aversion and desire to constantly wash hands] and made preparations to take care of them by providing hand wipes and paper towels. (Personal communication, December 5, 2015).

Audra also acknowledged the adult learners’ leeway in making choices for creating their art—for example, how they would choose to portray themselves in their self-portraits (all of which were vastly different from one another), recalling, “It was up to them to artistically reflect how they viewed themselves as individuals and apply it to their work.” She also acknowledged that students should be held to high standards and accountable for their choice-making, noting, “It is empowering to have choice, but it is also challenging” (Personal communication, December 5, 2015). Facilitating student empowerment and responsibility through choice-making allows for self-determination and participatory education as envisioned by IDEA. By providing for choice-making, the preservice art educators supported their students in creating art that was self-representative, self-actualizing, and self-expressive, as opposed to completing teacher-centered, banking-model versions of *making* activities.

To this end, Miranda and Caleb partnered to teach a lesson for creating clay power masks, through which participants explored the concepts of empowerment and self-representation. Together the class examined masks from indigenous cultures in Mexico, as well as those created by Ahmet Ustunal, an artist who has been visually impaired since the age of

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three. Using these examples, the class identified features (both human and animal) and facial expressions that conveyed the idea of power. Class discussion centered on what power was, and teachers asked students what made them feel powerful.

In creating masks for themselves, students from the transition academy used exaggerated facial features and expressions, weighty textures and added relief, distortion, and negative spaces to express powerful visages. Some students created power mask versions of their own faces. For example, Figure 4 reveals an expressively protruding brow, wide-open mouth, enlarged eyes, deeply carved textures, and high relief additions to create a formidable countenance. Figure 5 shows a human face resembling, in shape, that of its creator; but the hair dominates as it flows upward and around the head.

**FIGURE 4,** Power Mask, Example 1



**FIGURE 5,** Power Mask Example 2



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Other students created masks patterned from animals, or used fantastic creatures as powerful symbols. For instance, Figure 6—a mask created by a student who gravitated toward darker subject matter (for the painted self-portrait project, she created her likeness as a green zombie)—shows a powerful head of a horned creature. It leers through angular eyes and has a broad, toothy grin; its face is deeply tattooed with carved designs.

**FIGURE 6**, Power Mask, Example 3



The adult students on the autism spectrum thought deeply about their own perceptions of power, and of power as a quality within themselves. Caleb recalled an interaction with one of the students:

[She asked] me the question, “What is *your* definition of power?” during the lesson. I responded with my ability to be strong, to overcome obstacles, and to be a better me. I asked her right back that same question, and her reply was “serenity,” to be happy with herself. That kind of reflection shows just how [she was expressing] her inner thoughts on who she was. (Personal communication, December 5, 2015)

The learners with autism were also empowered through the study of artists experiencing disabilities, including some

on the autism spectrum. Of particular interest to the students was Marilyn Cosho, a retired librarian and fulltime artist with Asperger’s syndrome, who created an artwork entitled *The Big Book of Asperger’s Syndrome*. In a video interview with Randy Miller (2010), Cosho shares the interactive artwork, which conveys her experience of the syndrome, using the book as a means for educating others about the autism spectrum. Veronica—the preservice art educator who taught the lesson—noted that several of the students became animated while watching Cosho’s narration of her book, turning to one another and saying, “That’s me, that’s me!” One of the adults with autism, Katie, had a notably powerful response to Cosho. Veronica recollects:

One particular interaction I noticed was that [of] Katie, a talented, fresh-out-of-high-school 19-year-old [transition academy] student. At the start of our lessons, she was real reserved and did not wish to share or show anyone her artwork . . . During the Cosho lesson, Katie opened up . . . [She] raised her hand and stated, “That’s like me. I didn’t want anyone to see my artworks and thought people would . . . think that I am weird.” She really made connections with

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Cosho and opened herself up throughout the rest of our time [together]. (Personal communication, December 5, 2015)

Through the opportunity to see and hear directly from others who were neuro-diverse like she is, Katie was emboldened to reclaim her own autism spectrum experience. Cosho provided an empowering model for talking and creating art about the autism spectrum.

### **Planning and Teaching for Universal Design for Learning (UDL):**

***What strategies for universal design for learning (UDL) are included in planning for the specific population of learners for this project?***

Research question 4 asked how we used strategies for universal design for learning (UDL) for our specific population of learners. Before, during, and after planning for the HEARTS art sessions, university students engaged in discussing, strategizing, and reflecting upon ways to plan and teach with UDL principles to allow for full participation among learners. Preservice art educators deliberated upon issues of classroom space, changing rooms and rearranging furniture as needed for each lesson activity; they used multi-modal instructional strategies, presenting information in a variety of formats as called for by universal design principles. Some saw an advantage to the use of two sites—the university art studio and the transition academy classrooms—in that we had more space and control over our art studio; but the transition academy’s classrooms, though tightly configured, provided familiarity and desirable routine for the learners on the autism spectrum.

Miranda and Caleb, in planning their power mask lesson, created individual folders for each student, which included art historical information and pictures, a detailed schedule with times listed and both textual and pictorial description of each task. Caleb and Miranda also include multiple concrete examples for students, including art historical images and their own clay masks that they made as models. They also employed activities to reinforce student learning, such as making “powerful” faces and a discussion of the emotions conveyed in the face-making. Preservice art educators gave attention to pacing and pitch in speaking; structured flexibility; personal preferences among the adult learners; opportunities for self-actualizing through choice-making in art; breaking lessons and instructions down into smaller, step-by-step chunks; and organizing materials. These techniques, acquired from the HEARTS experience, will follow them into their teaching practice as art educators.

For instance, Veronica quickly realized that she made a mistake in prematurely passing out art materials before leading her discussion on Marilyn Cosho and the where-I’m-from collage activity. She later admitted that she needed to be thoughtful of both the use of supplies, along with student safety: “I needed to consider the work space I had at the [transition academy] and how to dispense all the supplies . . . Supplies should not have been handed out until after the demonstration and instruction period concluded. This should be noted when instructing a typical [K-12 art] classroom, as well: Teach first, then create” (Personal communication, December 5, 2015). In working with the watercolor/oil pastel resists, Audra and Barrett recognized that providing students with all colors of the watercolor sets they’d be using would result in muddy colors among the adult learners, so they separated the warm colors from



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cool. They then provided students with either a warm or cool set of colors, as they chose, then after drying, allowed for the other set of colors as desired.

The final exhibition was also installed with UDL principles in mind. Works were hung slightly lower than typical to allow for easy viewing by all audience members, including children and those in wheelchairs. We used large sans serif font, specifically Verdana, which is the most widely readable, according to UDL experts, for all textual information, and allowed for easy paths of egress throughout the gallery (CAST, 2015).

Malley (2014) maintains that using UDL principles should (a) provide opportunities for perception, symbols, and language for transfer of learning; (b) allow for physical engagement and development of expressive fluency and skills; and (c) facilitate interest, self-regulation, and sustained effort and persistence among learners. Caleb said, “Creating varied lesson plans, offering a usable environment and delivering lessons clearly could only benefit the whole classroom, regardless of ability. Being able to modify the lesson for someone with a disability so that all may participate and remain interested . . . require[s] flexibility” (Personal communication, December 5, 2015). The preservice art educators recognized that attention to UDL strategies could be beneficial to including *all* students, not just learners experiencing disabilities.

### Conclusions and Implications for Further Study

Wexler (2009) warns that “new teachers in particular must be sensitive and cautious when entering into territory in which they might potentially lose control. It is wise, therefore, to spend time observing children and set up opportunities for free conversations to take place before a teacher/mentor embarks on a serious project” (p. 13). That is why opportunities for field experiences like HEARTS are important for preservice art educators in preparing to include learners with moderate to severe disabilities in their art classrooms.

In response to the first and second research questions, the preservice art educators, through their participation in teaching and working alongside adult learners with autism in the field experience, increased in their levels of comfort in including difference in their future classrooms. They gained confidence in their abilities to attend to and facilitate meaningful learning experiences that provided for full participation of all learners, recognizing their own role as educators in mindfully cultivating classroom *communities*. Miranda noted:

Any age group, and at every stage (no matter the cognitive level), people can realize when they are being treated fairly and with respect versus being treated as “other” or as though they are not able to be capable, as they are. . . . The students of the [transition academy] were striving towards independence just as much as we [undergraduate students] are. . . They were perfectly capable of accomplishing the goals we set out for them (Personal communication, December 5, 2015)

Where the third and fourth research questions were concerned, the preservice art educators became accustomed to considering the different neurologies and ways of perceiving among the adult students with autism; in response, they were able to incorporate into their

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teaching strategies and subjects that included these differences and opportunities to facilitate empowerment through self-representation. Caleb shared one moving example of empowerment and belonging that involved Katie, one of the students with autism:

Katie had been at the (city's) First Friday Art Trail last month with Benjamin [another student from the transition academy, a pseudonym], and she did not have any of her own artwork to show us. She apologized for that, and I thought nothing of it, but it made a difference to her. She took the time before our next lesson at the [transition academy] to put all her artwork up around the room, kind of like a mini-gallery show. She did that for us. Katie felt a strong need to show us her work. When you put work up on the walls for critique, it is a way to empower yourself, to show others what you have made and to invite comments. That kind of personal empowerment is exactly what we were trying to teach. (Personal communication, December 5, 2015)

These findings indicate that visual arts-based field experiences that allow preservice art educators to work alongside learners experiencing moderate to severe disabilities (a) increases these future art educators' comfort levels in creating inclusive learning environments; (b) may be structured to facilitate the creation of fully participatory communities; (c) can create dialogic spaces in which to design curricular interventions that facilitate empowerment through difference; and (d) enable flexible planning for curricular and environmental strategies that apply UDL techniques. Derby (2011) argues that special education discourse must include the voices of those with first-hand experience of disability: disabled students, teachers, researchers and artists. Fine arts educators, he continues, should merge social justice and disability research to include the perspectives of those whose ways of being are connected to the lived experience of disability. Moreover, the Individuals with Disabilities Education Improvement Act (2004) demonstrates the expectation of participation of all citizens as a goal of education when it says

Disability is a natural part of the human experience and in no way diminishes the right of individuals to participate in or contribute to society. Improving educational results for children with disabilities is an essential element of our national policy of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities. (20 U.S.C. § 1400)

Structuring preservice field experiences in art from a disability studies perspective that is dialogic, with a particular goal of creating communities that honor difference, provides an important mechanism for preparing arts teachers to facilitate the development of a citizenry that is contributory and empowered by their differences. In this way, classroom practice may mirror the goals and philosophies of the IDEA.

Implications for further study include the possibility of following preservice educators into their professional art classroom settings, to see how they continue to apply what they learn in their pre-professional field experiences. Further study might also indicate how continuous similar field opportunities, at the preservice level, may further affect art educator attitudes and approaches to working with disability. Special attention may be given to collaboration among stakeholders in providing optimal visual arts education that includes all learners.

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Potentially, preservice art educators who are given opportunities for field experiences similar to HEARTS learn to be attuned to the specific needs of their learners. They may gain agility in attending to special educational learning needs through modifications of curriculum and instructional strategies (including UDL) and increase their own comfort levels in working with people who are different from themselves. Preservice participants in this study reflected upon their own practices of collaboration and teaching in reference to students' varied multi-modalities; they recognized their own assumptions and the realities of teaching to include learners with moderate to severe disabilities. They planned for teaching that allowed for full participation and that facilitated dialogue and belonging within the inclusive art class community. The recommendation is that art educator preparation programs incorporate similar preservice field experiences, thereby providing undergraduate opportunities that may translate into the facilitation of transformative and empowering visual arts education for students of all abilities.

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# A Museum-Based Program to Support Adolescents and Adults with ASD: Results of a Pilot Study and Suggestions for Implementation

CHRISTOPHER WENZ, JENNIFER KOWITT, and LINDA FRIEDLANDER

**ABSTRACT:** *This paper describes a museum-based experience for adolescents with Autism Spectrum Disorders (ASD), which was designed to engage participants with the visual arts and their communities and to support the development of skills essential for adult success. It first reports the results of a pilot study in which an art museum intervention originally designed to improve observation skills in medical students was adapted for use with adolescents with ASD. The experience, led by a museum educator, brings small groups of adolescents or adults with ASD together to closely observe, make inferences about, and discuss visual art. A rationale for the approach is provided on the grounds that community experiences for adolescents and adults with ASD are in high demand and can help reverse a concerning trend of community disengagement for this population. The results of the pilot study suggest that participants successfully engaged in the intervention and that further research on the intervention is needed to determine if the experience supports improvement in social skills. The paper concludes with recommendations that museum educators and others can use to design similar experiences in their local museums, including advice for selecting art, structuring the experience, and facilitating rich conversation.*

By definition, individuals with ASD have persistent challenges with social communication. According to the American Psychiatric Association (2013), the diagnostic criteria for ASD include (a) persistent and global deficits in social communication and social interaction; (b) restricted, repetitive patterns of behavior and interests; and (c) symptoms causing significant challenges in social, occupational, and/or other important areas of functioning. Challenges with social interaction and communication, coupled with restricted and unusual interests and behaviors, can manifest as overall social skills deficits. For some, the severity of symptoms is debilitating, dramatically limiting their independence. Others are able to lead fully independent lives. For all, the social and communication challenges impact their ability to learn, work, and participate in their communities throughout their lives (e.g., Howlin & Moss, 2012; Howlin, Moss, Savage, & Rutter, 2013; Newman et al., 2011).

The Centers for Disease Control estimates that the number of children identified with Autism Spectrum Disorder (ASD) has increased 220% since 2000 and now impacts 1 in 68 children in the US (Christensen et al., 2016). This rapid rise has challenged educators, researchers, the medical system and community organizations to develop treatment, therapies, support systems and educational models to improve the lives of people with ASD. In particular, early behavioral intervention has been widely adopted and some intervention models show dramatic results in toddlers with ASD that support their future development and achievement (see Dawson et al., 2010). These and other efforts have led to greater inclusion of children with ASD in K-12 schools: Nearly 40% of students with ASD spend more than 79% of their school

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day in general education classrooms. Similarly, post-secondary enrollment of people with ASD has increased: In 2011, Newman et al. reported that 44% of adults with ASD had enrolled in some post-secondary education (2011).

Despite these and other improvements, outcomes for adults with ASD remain poor when compared to their peers with and without a disability. A 2012 study published in the journal *Pediatrics* examined outcomes for young adults with ASD in two key areas: employment and postsecondary education (Shattuck et al., 2012). The authors compared young adults with ASD to others from three disability categories: Specific Learning Disability (SLD), Intellectual Disability (ID), and Speech and Language Impairment (SLI). When compared to these other groups, young adults with ASD had the highest risk of “being completely disengaged from any kind of postsecondary education or employment;” greater than 50% of young adults who had left high school in the past 2 years were not engaged in any education or paid employment (Shattuck et al 2012, p. 1046). Further, after controlling for level of impairment, young adults with ASD from low-income households were less likely to be employed and at a higher risk for no participation in employment or education.

Research has linked these challenges with postsecondary education and employment to difficulties in social functioning (e.g. Müller, Schuler & Yates, 2008; Hurlbutt & Chalmers, 2004; Pinder-Amaker, 2014). Although early intervention can help young children, they are still likely to encounter social challenges as the complexity of social situations increases as they enter adolescence and adulthood. Challenges in adjusting to and navigating this increasingly complex social world leads many young adults with ASD to feel socially isolated; without support adults with ASD can struggle with the social skills needed to succeed in post-secondary education and employment. Orsmond, Shattuck, Cooper, Sterzing, & Anderson (2013) examined the social participation of young adults with ASD and found that they were significantly more likely to “never see friends,” “never get called by friends,” and “never be invited to activities” when compared to those with an Emotional Disturbance (ED), Learning Disability (LD) or Intellectual Disability (ID). The authors also found that young adults with ASD have significantly higher odds of being socially isolated. Further, young adults with ASD had a higher rate of conversational impairment than the other three groups and were more likely to live with a parent or under supervision; within the group with ASD, those with limited conversation skills had significantly higher odds of never being called by friends and social isolation.

Supporting adolescents and adults in their social development is critical if people with ASD are to lead healthy and productive lives as full members of their communities. Yet there is a surprising lack of support available for people with ASD once they exit the K-12 system (Laugeson, Frankel, Gantman, Dillon, & Mogil, 2012). The lower participation in employment and postsecondary education of adults from lower-income families also indicate that there is a need for low-cost or free programs that connect adults with ASD to their communities and help them develop socially.

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## **Rationale for a Museum-Based Experience**

Museums offer an ideal setting for programs that target the social functioning of individuals with ASD. In addition, museum-based experiences provide valuable opportunities for people with ASD to spend time in their communities, connect socially with peers, and have a cultural experience. The American Academy of Museums (2005) states that as part of their best practices, museums should promote education as central to their mission. As a part of this call to action, museums have in recent years been eager to improve their accessibility, developing programs to meet the needs of previously underserved groups, including individuals with disabilities. Museums are community institutions for lifelong learning, and as such, they are age-appropriate venues in which adolescents and adults can continue to advance their education in the real world. Museums have developed programs for individuals with ASD, intellectual disabilities, and Alzheimer's Disease (American Alliance of Museums, 2013).

Adolescents and adults with ASD are in particular need of instruction and intervention to improve their social skills. Although we know that social skills are malleable and can be taught, alarmingly few social skills interventions have been tested for use with adolescents and young adults with ASD. For example, Reichow and Volkmar (2010) identified and analyzed 66 studies testing interventions to improve social behavior in people with ASD. Of these 66 studies, just three included only adolescents or adults as participants. Clearly there is a need to develop and test social skills interventions for adolescents and adults with ASD. Further, there is evidence that museum experiences can have positive social benefits for children with ASD (Schleien, Mustonen & Rynders, 1995; Gaffken, 2013). This creates an exciting opportunity for museums to act on their mission while addressing an important need for an under-researched and under-served population.

## **Potential Benefits of the Experience**

The museum program we describe in this analysis is adapted from an existing intervention developed at the Yale Center for British Art. This original intervention was designed to teach observation skills to medical school students at the Yale School of Medicine (Dolev, Friedlaender & Braverman, 2001). In this intervention, students learned to identify relevant visual cues and cluster them to draw conclusions about what they saw in paintings in the museum. Students who participated in the intervention were significantly better at visually describing and diagnosing specific medical conditions after the intervention than were their peers randomly assigned to two control conditions.

We sought to adapt this intervention because we believe that explicit training in identifying and drawing conclusions about relevant visual information may help address a key challenge for people with ASD: social perception (Ashwin, Chapman, Colle, & Baron-Cohen, 2006; Sasson, 2006). Social perception involves a range of cognitive components, including the perception and interpretation of socially relevant visual cues; people with autism often have difficulty locating and reading relevant visual information, impairing their ability to navigate social situations (Kandalaf et al., 2012). So, just as medical students benefitted



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from explicit training to “see” in ways that support their future practice (Dolev et al., 2001, p. 1020), people with ASD may benefit from explicit training to help them to perceive social cues. Although social perception is critical to human interaction, few interventions exist to target its development; as discussed above, this is particularly true for adolescents and adults.

Beyond the development of social perception, we also believe the intervention has the potential to build other important social skills, especially around the development of theory of mind (ToM): the ability to infer the mental states of others (Premack & Woodruff, 1978). In their foundational article, Baron-Cohen, Leslie, and Frith (1985) describe ToM as involving the ability to know that other people know, want, feel, or believe things, and that these things may differ from what you know, want, feel, or believe. Struggle with theory of mind has been found to be a hallmark of ASD (Baron-Cohen et al., 1985; Wilson et al., 2014; Scheeren de Rosnay, Koot, & Begeer, 2013 ). Without a developed ToM, many social tasks are challenging. For example, conversation requires taking the perspective of your partner, including understanding their interests, and making adjustments in tone and topic based on what they share; without these skills related to ToM, people with ASD may find it difficult to engage in the types of conversations that help establish and maintain friendships and professional relationships.

Research also suggests that social skills interventions are most effective when they provide opportunities to learn in naturalistic settings and when they “allow for practice with unfamiliar adults and children” (Rao, Beidel & Murray, 2008, p. 359).

We believe that the intervention we adapted in the pilot study described below challenges students to consider the mental states of the subjects in paintings and the mental states of their peers, while also providing valuable opportunities to learn, practice, and generalize social skills in a naturalistic environment.

### **Description of the Study**

The goal of this pilot study was twofold. First, this study was designed to determine how the original intervention (Dolev et al., 2001) may need to be adapted to be an appropriate and engaging educational experience for adolescents with ASD. Second, we wanted to determine how the museum experience may support the social development of adolescents with ASD. As such, we proceeded with the following research questions:

1. What elements (group size, role of the facilitator, total time of experience) need to be changed or adapted to make the original intervention appropriate and engaging for adolescents with social skills challenges?
2. Which version of the adapted intervention is preferable to the students?
3. How might this experience support social development?

### **Participants**

All participants were students at one school in the Northeast United States that exclusively serves adolescents with ASD and related diagnoses. The school’s program,

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while catering to this unique population, prepares students for post-secondary education, similar to public high schools across the country. As such, the students in our study fall at a specific place on the autism spectrum; They have strong oral and receptive language skills to participate in a rigorous college preparation program, making them different from many children with autism, for whom oral language is often a particular challenge.

Participation in the school's academic year or summer program served as a screening tool, as all students come to the school with an ASD or related diagnosis. An explicit mission of the school's program is the development of social skills. As such, all students enrolled in Franklin's programs were eligible for our pilot study if they were in or entering Grades 9-12. We recruited 11 students to participate. Five were female and 6 were male, with an average age of 16.

### Structure of the Intervention

The intervention had four phases. The first phase consisted of an introductory session that took place at the school. The remaining three parts took place at the Yale Center for British Art; each is described below.

**Phase 1.** The front-loading of new experiences is important for students with ASD, many of whom find new and novel experiences challenging and anxiety-provoking; the use of social stories with children with ASD is in part intended to help alleviate this anxiety (see Kokina & Kern, 2010, for a summary of research). With this in mind, during Phase 1 we met with participants at their school to prepare them for their trip to the museum. Through viewing images of the museum and our discussion, participants were introduced to the structure of the experience and museum etiquette. They also practiced the skills we were asking them to use while at the museum. This practice involved viewing several paintings and having brief discussions about identifying visual facts and making interpretations. We also left time to answer any questions and address any concerns participants had about the study.

On the day of the study, this "front-loading" continued. When participants arrived at the museum the day of the study, we brought them to a quiet place in the museum for a short meeting. During this time, each participant was randomly assigned to the group they would work with during Phases 2, 3 and 4. In order to answer our first research question, we tested slight variations related to group size and the role of the facilitator. In terms of group size, we created one group of three and two groups of four. This variation allowed us to see how group size might affect the length of the intervention and the quality of discussion. Participants were also introduced to the facilitator assigned to their group, necessary materials were collected, and participants were given the opportunity to raise concerns or ask any final questions.

**Phase 2.** In Phase 2, each participant was assigned to their own painting. Their task was to look silently for up to 10 minutes in preparation for describing the painting to their peers in their assigned group. Participants were provided with scaffolded worksheets that encouraged them to take notes or make sketches and provided guides for viewing the painting. (You can find a copy of this worksheet and other materials from our study at <http://>

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wp.asdmuseum.education.uconn.edu. At the end of 10 minutes, participants rejoined the group to which they were assigned in Phase 1. Throughout the experience, the museum labels describing the paintings were covered so that participants had to rely on what they saw in the paintings.

**Phase 3.** In Phase 3, each participant objectively described their paintings to their peers and the facilitator. The goal was for students to remain focused on objective, visual facts rather than on interpretations of what they saw in the paintings. For example, when viewing *Wreckers* (see Figure 1), a statement of a visual fact may be, “I see the water has white in it,” while an inference may be, “the water is choppy and the weather is bad, which might have sunk the ship.” The role of the facilitator during this phase was to ask guiding questions and to redirect participants if they made subjective comments or inferences. For example, if a participant made an inference, the facilitator might ask, “what do you see that makes you say that.”

**FIGURE 1**



Joseph Mallord William Turner, 1775–1851, British, *Wreckers -- Coast of Northumberland, with a Steam-Boat Assisting a Ship off Shore*, between 1833 and 1834, Oil on canvas, Yale Center for British Art, Paul Mellon Collection

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**Phase 4.** In Phase 4, the goal was for participants to cluster observed details to make inferences about their painting. Students made inferences about what is taking place in the painting, based on the visual facts described in Phase 3. After the participant assigned to the painting in Phase 2 and 3 presented their interpretations, the discussion was opened to all participants to point out additional details and present their own inferences, draw out and highlight multiple perspectives, make connections to the social world, and bring in visual information the group may have missed.

In regard to the role of the facilitator in Phase 3 and 4, we tested three variations related to when the facilitator made connections between the process of describing the paintings and social perception. These types of explicit connections are important to help people with ASD generalize the skills they are learning, so that they can be applied in other contexts, not just in the context of this experience. Each variation is described below.

Role A: Throughout Phase 4, the facilitator made connections and prompted participants to discuss the process describing the paintings and social perception.

Role B: Only at the conclusion of the discussion of each painting in Phase 4 did the facilitator make connections and prompt participants.

Role C: Both during discussion in Phase 4 and at the conclusion of the discussion of each painting, the facilitator made connections and prompted further discussion.

### **Data Sources**

Data for this study came from several sources. We videotaped all sessions of the intervention to address our first and third research questions (elements that may need to be changed or adapted to make the intervention appropriate and engaging for adolescents with social skills challenges and how the experience might support social development). Additionally, we collected two types of data from Phase 1: the guided notes participants used as well as a data sheet we used to track how much time participants took to examine their painting. To answer our second question (which version of the adapted intervention is preferable to the students?), we conducted brief feedback sessions after the intervention ended. Participants were asked to complete a questionnaire (available at <http://wp.asdmuseum.education.uconn.edu>) and take part in a brief group conversation about their experience. We took notes during these sessions to record further feedback and suggestions from participants.

We began by analyzing videos, looking for differences in the number of inferences participants made about the content of the paintings, in addition to connections they made between that content and their social worlds. This mode of analysis was abandoned, as we did not see differences between the versions. As such, the test of our variations was inconclusive: All variations engaged participants in the intended activities. As a result, we instead turned to look at the recordings and other data sources qualitatively to identify instances in the sessions that support social skills development. As we were not collecting data to assess the efficacy of the intervention, this process was meant to be descriptive, and help us determine whether the intervention provided opportunities that support important social development for adolescents

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with ASD. We began with a set of themes tied to goals of the intervention: social perception and social inferences, perspective taking and theory of mind, and generalizing to social connections. Our analysis, then, focused on identifying instances in the sessions in which we could see these processes happening.

### Findings

**Overall engagement and suggestions from participants.** Reports from participants indicate that this intervention was an engaging and enjoyable experience; all participants were able to complete the intervention and engage in all the tasks they were asked to perform. However, it was common for the facilitator to redirect participants to help them remain on task and stay within the parameters of each phase. For example, in Phase 2, participants often needed reminders to focus only on details, and not jump to making interpretations of what they saw. One frequent prompt the facilitator would tell the participant was, “Tell me what you see that makes you say that.” In other instances, facilitators would ask questions that drew attention to details that participants had not yet noticed. When participants strayed into conversations that were tangential, facilitators often reminded participants of the task by saying things like, “What other details did you notice?” These types of prompts, redirections and instructions were sufficient to help all students engage successfully in the tasks; all were able to complete the 3-stage process and engage in dialogue with their peers about the paintings during Phase 4.

On average, participants spent 8.9 minutes actively observing their painting during Phase 2, indicating that 10 minutes is an appropriate amount of time to observe a painting. Ten of the eleven participants used the guided notes we provided for use during this time. In the feedback session, several students suggested improvements to the guided notes. One participant suggested including “more guiding questions about what the individual should look for in the painting.” Another suggested that “more prompts on the paper would inspire people to look at certain details and interesting things.”

Table 1 shows the length of the intervention in each of the three variations. The average time groups spent on an individual painting was 19 minutes and 30 seconds. Group A had the longest duration, and two participants from that group provided feedback that the intervention was “way too long.” This indicates that examining four paintings might stress the attention of participants. However, Group C, which also had four participants, had a much shorter duration, and that group did not provide any negative feedback about the length of the intervention. One member of Group A suggested that groups be formed so that there weren’t many “heavy talkers” in the same group. These results and feedback indicate that although four participants may provide additional opportunities for dialogue, the added length of the intervention can present a challenge to some.

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**TABLE 1.** *Duration of Intervention in Minutes*

<u>Painting</u>	<u>Time of Intervention for Each Group of Participants</u>		
	<u>Group A</u>	<u>Group B</u>	<u>Group C</u>
Painting 1	22:18	16:13	17:57
Painting 2	18:48	28:43	17:27
Painting 2	22:18	17:50	14:43
Painting 4	23:23	N/A	14:50
Total Time	86:52	62:46	64:57

**Making Social Connections.** In order to highlight the kinds of processes in which we saw participants engage, we will share three examples from our data. Each highlights how participants engaged in one of three central processes that are important for the development of social skills: making social inferences from visual information, perspective taking, and generalizing skills. We argue that these experiences provide supportive practice with social skills, which is essential to social development for people with ASD.

**Making Social Inferences from Visual Information.** While viewing “Life of Buckingham” (See Figure 2) one participant focused on the man and woman in the far left of the foreground:

Participant 1: She actually looking like she’s falling in love with that man just by the expression on her face. She’s kind of gazing at him lovingly.

Facilitator: Well, falling in love is an inference, but I like the way that you’re describing what you’re seeing. You are even turning your head in a certain way to sort of show us....what are you doing there?

Participant 1: Kind of like she’s, I don’t know, she’s squinting her eyes, and smiling kind of softly but it definitely shows, like when someone is like flirting with someone.

Facilitator: OK, so she’s kind of leaning in, tilting her head, a soft smile.

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FIGURE 2



Augustus Leopold Egg, 1816–1863, British, *The Life of Buckingham*, undated, exhibited 1855, Oil on canvas, Yale Center for British Art, Paul Mellon Collection

Later in the same discussion, Participant 2 adds additional inferences about the same man and woman; throughout their discussion, the facilitator labels what they're doing while viewing the painting and then asks them to connect these skills to their social lives:

Participant 2: The two front people, where their hands are kind of...[mimicing the gestures in the painting]...shows that they're not really attentive to anything else. Because her hand is on the chair in between them. So she's kind of supporting herself as she's leaning in to block everyone else out. And he's using the back of the chair to support himself to block everyone else out.

Facilitator: Interesting. So you're using their body language to help you make guesses about sort of their purpose.

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Participant 2: Yeah. Like no one is going to change their, like they're not going to add anyone else to the group, just them just their little fixed group...

They seem like they're hiding behind...

Facilitator: I like that you're reading their body language to give us clues, [Participant 1], you were doing something similar as well with that same woman to give us clues about what their motivation is or what they're doing...I like how you're combining sort of the details that you see, and their body language and their facial expression to make a really smart guess about what's going on. Of course that's something we do all the time, not just when we're making guesses about paintings, but when we're out in the world. Can you think of a time recently when that was useful, or when it was maybe harder than you would have liked it to be?

Participant 1: Maybe, if you're at an event of some sort, maybe a concert. And someone thinks you're standing too close to them and they're sort of [leans side to side].

Facilitator: Yeah! So you've got the context of the concert and reading their body language and you've put that together to figure out what's going on or what you should do.

Participant 1: Yeah, it's like someone is telling you, "Give me my space to dance, man."

During this discussion, participants are reading visual clues in the paintings to make social inferences. Throughout, the facilitator is careful to explicitly label what participants are doing when they are reading these cues, making clear to the whole group how these visual cues are grouped together to make good inferences. Viewing the painting this way, and with guidance from the facilitator, provided supportive practice in reading social situations. As an additional step, the groups also had the opportunity to think about how they could apply the same process to their social lives.

**Theory of mind.** We found that the experience often opened rich debate and discussion about the art in question. While one group was viewing Turner's *Wreckers* (see Figure 1), each of the four participants had a different perspective on what was occurring in the painting. After Participants 1 and 2 presented different views on what was happening in the painting, the facilitator opens up a further conversation about their differing perspectives:

Facilitator: "What do you predict, based on what you see and what you think is going on, is in the future of [the other ships in the painting]. I want to ask [participant 1] about your interpretation and then I'll ask [Participant 2]."

Participant 1: Probably not very good. Like I said, there's a storm.

Facilitator: OK, so you think something really crashed up here in the painting, and [the other ships] are involved in the storm, so you're saying the same thing is going to happen to them. [Participant 2] on the other hand, what do you think is going on?



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Participant 2: [Participant 1] said they're pulling people out of the wreckage of the crash.

Participant 1: Pulling the wreckage out.

Participant 2: Why would they pull the wreckage out?

Participant 1: For the materials.

Participant 2: It will wash up eventually.

Participant 3: I beg to differ. I see a rowboat. I'm thinking they escaped the shipwreck by going in the rowboats that they have on ships for emergencies.

Facilitator: OK. What do you think [Participant 4]?

Participant 4: Well, I think that there's a storm coming, and the ship in the back[ground of the painting] is being tilted so it might be tipped over in the storm. The ships are in trouble. This seems like a ship that broke apart and the people are escaping and saving what they can...

Facilitator: OK. Well I love it when we have lots of different reactions and opinions to the same thing. And I think that's important to understand that because you might feel one way about something or somebody, that lots of other people might not.

In this conversation, participants were challenged to clearly communicate their ideas to their peers, consider the opinions of others, and respond in order to persuade or argue with their peers; as such, the intervention serves as an opportunity to practice "perspective taking" and contributes to their understanding of how others may view a situation differently from them. These are skills related to ToM and are essential for the types of communication required in education and employment settings.

**Generalizing Skills.** During Phase 4, in their written feedback and in the feedback session at the conclusion of the intervention, participants made connections between the skills used during the intervention and how they may be applied in their everyday lives. One challenge of social skills training for children with ASD is that the skills learned in the intervention don't always transfer to use in the real world. Children with ASD require support in understanding how the skills they learn can be applied across settings (Rogers, 2000). Research has shown that generalization is particularly limited when adults mediate the social learning experiences (DiSalvo & Oswald, 2002). Thus social skills training that occurs in groups and involves interaction and learning with peers, especially in a natural social setting, has been shown to be more effective (Rogers, 2000; Krasny, Williams, Provencal, & Ozonoff, 2003).

On the questionnaire, we asked participants what skills they used during the activity. One participant responded, "I tried to look at the smaller details and use those to draw conclusions about the painting." Another wrote, "I used concentration, focus and picking up

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minute details. I had to look deeply and think.” Similarly, one participant wrote that she “took time to observe small details and analyze facial expressions before making assumptions.” When asked, “How is processing visual information important to social situations?” one participant wrote, “Looking at body language can show a person’s emotion and change a situation.” Another wrote, “Processing visual information can help you pick up clues in a social situation.” Similarly, another participant said that they can use visual information to “see facial expressions to know how a person is feeling.”

When asked on the questionnaire, “What did you learn during this museum activity?” some participants remained focused on the skills in relation to paintings. One participant wrote that they learned “that it is still as possible to find a lot of details in broader paintings as it is in close-up paintings.” However, others connected the skills they learned to more general situations. A participant wrote, “I learned how to deduce several possible conclusions through observations without knowing the context.” Another simply wrote that he learned, “how powerful my observation skills are.”

In the feedback session of one group, a participant remarked that “talking through opinions about what we see is helpful for us as we apply it to social situations because we can learn about what other people think.” Another participant added an example of when there are differences of opinion at school, how “adults and students have differences of opinions a lot about things happening socially.” She thought that this experience in the museum may help them get better at dealing with what she called “gray situations” in their social worlds.

Facilitator: How is the process that we just used related to our social lives?

Participant 1: Observing people, facial expressions, body language, and also commiserating with other people about what they think of the situation they see and then either agreeing or disagreeing.

Facilitator: Ahh. I like that you’ve put in that check. So we look on our own, we draw conclusions on our own, but we can also check with other people to say, “are you reading this situation the same way?”

Facilitator: [Participant 2], What do you think?

Participant 2: I think that it was nice that we all got to state our own opinion, but like you said, in the interest of time, we had to cut everyone off short. But I felt like some people were talking way much, like I was talking a lot more than [Participant 1].

Facilitator: And that feels similar to social situations? Like some people talk more and some people talk less in social situations?

Participant 2: Right. And sometime that’s not always good.

Facilitator: Ahh so, sort of paying attention to that.

Participant 1: Because there was a time constraint on, it might not be such a good thing if some people talk more than others. But in social situations there are people who like to talk more and some people who don’t like to talk more and just observe and listen.

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Facilitator: And we do want to pay attention so that people get the chance to talk in social situations too. So [Participant 3] let me ask you, how can looking closely like we did today help us in social situations?

Participant 3: I think body language is kind of necessary.

Facilitator: Ahh, so just like we looked at body language in the paintings we can look at body language in social situations.

Participant 2: Also so you don't take cues incorrectly.

Participant 4: It's still possible to take them incorrectly. One body language doesn't mean the same thing all the time. All you can do is look closely and guess, and the context, and figure out what might be going on with someone. Looking closely just gives you the very baseline impression of how they are.

Facilitator: It may not be that we get it right, but it means we might get it more right.

Participant 1: And also the tone of voice. You can't do that with a painting, maybe you can get the tone of the setting, but in social situations the tone of voice just adds in that extra bit of help if you're not completely sure about the body language and facial expressions. A lot of different emotions and characteristics. I think there's a lot of gray areas because they're really similar, so, if you,...I think that tone of voice of a conversation can be the final push to read a social situation.

In another group, a participant remarked that "Talking through opinions about what we see is helpful for us as we apply it to social situations because we can learn about what other people think."

In this exchange and through the feedback participants provided, we can see how participants have made connections between the observation, inferencing, and perspective taking and their lives more generally. The intervention explicitly asked participants to engage in this process of connecting these skills to their social lives because this process is essential if they are to apply these skills in the real world. People with ASD often have challenges learning social behavior implicitly, unlike their neurotypical peers who often learn much about how to behave in social situations by watching others (see Foti, DeCrescenzo, Vivanti, Menghini, & Vicari, 2015). The explicit conversations in our intervention, which bring learning about how to read social situations out into the open, is an important approach to helping people with ASD learn and then apply social skills.

### **Discussion**

The purpose of this study was to adapt an existing intervention designed to improve observation skills, and then to pilot this adapted form of the intervention with students with social skills deficits. Specifically, our research questions were: (a) What elements need to be changed or adapted to make the intervention appropriate and engaging for adolescents with social skills challenges? (b) Which version of the adapted intervention is preferable to the students? and (c) How might the intervention support social development?

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## Limitations and Implications for Future Research

Our intention in this pilot study was to establish theoretical links between what occurred during the museum experience and what practices are known to be effective in developing social skills in people with Autism. Our study was not designed to empirically test the efficacy of this intervention. As a result, we do not have sufficient evidence to claim that this museum experience improves social skills. Therefore, future research should test the theoretical links we have established in this paper and investigate what effect the intervention has on social perception, theory of mind and other social skills in children with ASD.

Additionally, the participants in our study represent a very specific slice of the autism spectrum: these 11 participants were enrolled in a rigorous college-preparation program and frequently receive social skills instruction and opportunities to practice social skills as a part of their school program. Further, all possessed the requisite language skills to engage in what can be challenging tasks. While they successfully engaged in this intervention, we cannot be sure that all adolescents with ASD will have the same experience. For example, adolescents with ASD who have more pronounced speech and language differences may find the pace of the intervention and the tasks more challenging and perhaps more frustrating. These and adolescents with other challenges may require modifications to the intervention that take into account their specific needs. Future research is needed to understand whether and how this museum experience can be used with students with more limited language skills.

## Suggestions for Implementation

The goal of this pilot study was to test the feasibility of this adapted intervention for use with adolescents with social skills challenges. Based on student responses and behaviors outlined above, we can conclude that the intervention was tenable, and indeed enjoyable, to the students who participated. As such, we make the following recommendations to others interested in designing similar programs.

## Selecting Works of Art

**Size and location of the work.** Paintings should be large enough for all members of the group to observe them in full at the same time. Paintings that are too small make it hard for everyone to see and can be a barrier to attention and whole-group discussion. Additionally, individuals with ASD may be particularly sensitive to loud sounds and crowds, and thus may feel uncomfortable and have a hard time focusing in high-traffic areas of your museum. In a study of the motivations and needs of families of children with autism when visiting a museum, Langa (2013) found that “unpredictable and excessive sensory stimuli” were a barrier to an enjoyable museum experience. Similarly, in their feedback on our intervention, two of our participants indicated that the conversations and movements of other museum visitors were distracting to them. The challenge, then, is to strike a balance between experiencing the museum in a natural way and minimizing excessive noise and visual distractions. One option to strike this balance is to select paintings that are located in an area of the museum that is not particularly crowded and still has the space for all group members to sit comfortably around it. Another option is to schedule the experience at a time when it is unlikely that there will be large crowds.

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**Style, subject matter and level of detail.** The subject of the painting should have something to do with gesture, facial expression, or social interaction. Portraits, conversation pieces, or narrative scenes are good choices; landscapes and still lives do not present the same opportunity for the facilitator to make connections between the painting and real social interaction.

Paintings that depict something ambiguous provide particularly rich opportunities for discussion. While disagreements about what is happening in a work of art may occur during discussion of any painting, they are particularly likely to happen with ambiguous works, which may help students begin to understand theory of mind. Such works may challenge students to consider how their peers may have differing opinions and what led them to those opinions; we saw these differences of opinions with the painting *Wreckers* discussed above. Finally, a painting should have enough detail so that the student assigned to it will have enough to describe. However, a painting with too much detail may be daunting to a student asked to describe what they see. Further, several of our participants indicated that it would have been helpful if the guided notes we provided in Phase 2 could have provided more specific suggestions for how to view their paintings. This extra level of support could help make an ambiguous or highly detailed painting more accessible, and, more generally, teach participants how to view paintings closely.

**The role of the facilitator.** As can be seen in our examples, the facilitator has an important job in keeping participants focused on the task, in guiding practice around making inferences, and helping students to make connections to their social lives. To help assist in implementing this experience, we have provided a script and prompting guide that guides facilitators through each phase. These materials can be found at <http://wp.asdmuseum.education.uconn.edu>.

### Conclusion

Our results suggest that the museum experience we describe in this paper has features similar to social skills interventions described in existing literature. Further, our participants reported that this experience was an engaging and educative experience. This suggests that museums can potentially be a venue for rich conversation and social connection for this population. As a result, we believe that community-based experiences such as this one can contribute to improving the lives of people with ASD; in reporting on this pilot study and sharing suggestions for implementation, we hope that educators in K-12 schools and museum educators will consider adopting this experience to support the social development of adolescents with ASD.

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# Preparing for Life: The Role of Music in Facilitating the Transition of Older Students with Disabilities to Adulthood

MARY ADAMEK AND ALICE-ANN DARROW

**ABSTRACT:** *This paper provides a research-based rationale and practical information for supporting music experiences with older students and young adults with disabilities, particularly those with significant disabilities that interfere with their development of social skills and personal agency and their inclusion in community life. Developing musical skills and performing in musical ensembles can help facilitate interactions between older students with disabilities and their same-age peers. Participation in community music activities can also assist in reducing stress and isolation. The authors conclude the paper with an example of research-to-practice. They profile a music program for older students with significant disabilities at The University of Iowa. The UI Reach Program provides a model that typifies the research and premises discussed throughout the paper.*

The benefits of musical experiences for students with disabilities are well supported by research that links its positive impact to academic and social/emotional success (see, for example, review by Jellison & Draper, 2015). Because of recent special education initiatives—such as universal design for learning and differentiated instruction—and technological advances—such as iPads® and electronic instruments—opportunities for students with disabilities to participate in musical experiences have increased greatly over the past several years. In addition, inclusive practices such as differentiated instruction and universal design for learning have influenced music educators’ approaches to teaching students with disabilities. Finally, with the passage of the Every Student Succeeds Act (ESSA) in 2015, the opportunity now exists to broaden musical opportunities for all underserved students, including those with disabilities.

Rarely addressed in the literature, however, are older students with intellectual disabilities, who may present special challenges because of a discrepancy between their chronological age and their developmental age. Developmental age is the age at which a student functions emotionally, physically, cognitively and socially. Chronological age is based on date of birth. When the difference between a students’ functional age and actual age is significant, research supports the use of instruction that is chronologically-age appropriate and meaningful for the student (Browder, Wood, Thompson, & Ribuffo, 2014; Edeh, 2006). This paper provides a research-based rationale and practical information for supporting music experiences with older students and young adults with disabilities, particularly those with significant disabilities that interfere with their development of social skills and personal agency, and their inclusion in community life. The paper concludes with an example of research-to-practice, and highlights a music program for older students with significant disabilities at The University of Iowa. This model program draws the relationships between much of the research presented throughout the paper and educational practice.

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Many students with disabilities continue to need support throughout their educational careers and into young adulthood. Approximately 13% of all students in the US between the ages of 3-21 qualify for special education services under the Individuals with Disabilities Education Act (IDEA 2004) (National Center for Education Statistics, 2016). Students without disabilities often have difficulties navigating the complexities of life after high school (Achieve, Inc., 2014). However, older students with disabilities may experience more challenges than most young adults during life transitions (Stewart et al., 2010). These students may lack appropriate communication and/or social skills and have a greater need for predictability, and thus, may have more problems when routines or patterns of behavior are disrupted. Unfortunately, most life transitions involve an inherent degree of unpredictability, especially the transition from school to adult life (Stewart et al., 2010). Consequently, secondary and postsecondary students with developmental disabilities frequently require some level of support during and after high school (Blacher, 2001; Jordan & Dunlap, 2001).

In order to thrive in adulthood, all individuals must possess a core set of skills that will enable them to navigate the world around them. They must be able to engage competently and confidently with others, solve problems in both familiar and unfamiliar situations, and develop personally and professionally as positive citizens who can actively contribute to society (Axis Education, 2015). These skills require functional social skills, a sense of personal agency, and a way to relate to the community in which they live. For most adults, the development of these skills is a natural outcome of the social and academic training they received at home and school (Kinder, 2009). However, for many students with disabilities, the acquisition of these life skills requires retooling and continued practice into adulthood. The ability to generalize life skills in multiple settings is of particular importance, especially since many students with intellectual disabilities experience difficulty in transferring skills learned in the classroom to real world situations (Webster, 2016). Participation in extracurricular activities has been found to be particularly useful in facilitating older students' successful transition from school to adulthood (Vinoski, Graybill, & Roach, 2016). Music participation is one of most popular of all curricular and extracurricular activities for both students and young adults (Billboard, 2016; Elpus & Abril, 2011). Thus, the theoretical foundation exists for music as a context in which to support young adults with disabilities in developing necessary life skills.

Many students with disabilities need assistance in social skills, self-determination, and community engagement to support their transition from school to community life (Nagaoka, Farrington, Ehrlich, & Heath, 2015). Students' participation in music activities can be carefully planned to provide instruction and practice in these areas. Many young adults, with or without disabilities, respond positively to music. Music is highly valued, and can serve as a motivator and reward for engaging in many activities that support an individual's personal development. Music, because of its pervasiveness, universal appeal, and flexibility in terms of tempo, complexity, and genres, is particularly suited to support the development of social skills and personal agency and to provide avenues for engaging in community life (Deci & Ryan, 2002).

### **Musical Experiences to Support the Development of Social Skills**

Appropriate social skills are necessary for successful inclusion and normalization. Individuals with disabilities, particularly those with cognitive disabilities and Autism Spectrum

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Disorder (ASD), often have core deficits in social perception and initiating social interactions. These deficits contribute to the complexities of maintaining interpersonal relationships and understanding the perceptions of others (Scott, Clark, & Brady, 2000). Individuals' social difficulties can range from mild, such as difficulty making and maintaining eye contact, to more severe, such as the inability to share experiences and interests with others. Even young adults with higher functioning skills may have problems understanding the perspective of others, and understanding that the thoughts, beliefs, and intentions of others may be different than their own. Music professionals can utilize the inherently social nature of music making and music engagement to help students practice and develop appropriate social skills (see, for example, Silverman, 2011).

Singing, playing instruments, and moving/dancing with others can provide the musical foundation for interacting with others. Social skills that can easily be embedded in any music making and movement experiences with others are greeting and departure rituals, turn taking, sharing instruments and music, listening, attending to task, following directions, seeking attention appropriately, taking responsibility for various tasks related to the success of the music making group, and accepting the consequences of one's behavior. In addition, music making experiences within small and large ensembles or groups can be structured to gradually increase the social opportunities available to students. Including typical-developing same-age peers in music making experiences can also provide appropriate social models and practice partners.

For many students with disabilities, social skills are not learned incidentally during music making or during any other social activity. Social behaviors vary depending on context, and thus, often require individuals to execute subtle judgments. Many students will need direct instruction and coaching to learn critical social skills. Direct instruction is the use of straightforward, explicit teaching techniques used to teach a specific skill. Songs designed to teach a specific social skill are an example of direct instruction. In my own practice, it is common to begin sessions with a 'hello song.' Embedded in the song lyrics are instructions to say hello and shake hands with a friend. Hello songs are useful in teaching typical greeting behaviors. Other songs can be used to teach a specific skill. For example, *The Expression on My Face* teaches reading the emotions of others. This song and other such songs designed to teach social skills can be found at Songs for Teaching Social Skills < <http://www.songsforteaching.com/socialskills-interpersonal-interaction-children/>>.

Since communication provides the foundation for developing and maintaining social relationships, young adults with some disabilities may need to develop functional communication along with social skills in order to enhance their abilities to interact with others, make friends, and be included in community life. Using songs designed to teach vocabulary and other language skills can be an efficient and engaging way to promote communication skills. One of my students' favorites is the *Opposite Rap*, chanted in rap style to a heavy back beat. This song is particularly appropriate for older students who are working on increasing their vocabulary.

This is the opposite rap.  
You say the opposite when I snap.  
I say war, you say (peace),

I say old-fashioned, you say (modern),” etc.

Similar songs can be found at Songs for Teaching Language, <<http://www.songsforteaching.com/reading.htm>>.

When choosing songs, music professionals must assess the lyrics of the songs and consider their students’ language skills, developmental level, age, and interests. Doing so will assist music professionals in selecting songs that are appropriate to a student’s present level of language knowledge and use and musical interests. Song lyrics are most beneficial in developing communication skills when students find the songs musically appealing and when they can understand the lyrics.

Some individuals with disabilities have a wide discrepancy between their chronological ages and developmental ages. Frequently, their academic needs will align with their developmental ages, while their musical preferences will align with their chronological ages. Unfortunately, many music professionals default to a student’s developmental age when selecting music material. However, many popular songs can also be used to teach reading, vocabulary, punctuation, and other language skills. An activity that my students enjoyed was taking a song that was popular at the time and discussing/analyzing the lyrics. We would look up synonyms or antonyms for specific words in the text, and then sing the song with those words. They often said they liked ‘their words’ better than the original words. Examples of popular songs with lesson materials for language learning can be found at <<http://www.isabelperez.com/songs.htm>>. It is important to remember that the definition of ‘popular song’ changes with time; however, the strategies for using a song to teach language concepts remain the same.

### **Musical Experiences to Enhance the Development of Self-Determination**

Developing self-determination in young adults has been a best practice in education since the 1990s when IDEA mandated increased focus on and student involvement in transition planning (IDEA, 2004). Self-determination focuses on the degree to which individuals are self-motivated and can independently determine future endeavors. “Self-determination refers to the ability of individuals to be self-regulated, autonomous, self-realized, and psychologically empowered. It includes the following elements:

- self-management and understanding,
- independent-living, risk-taking, and safety skills,
- internal locus of control,
- decision making,
- choice making,
- problem solving,
- goal setting and attainment,
- self-instruction skills,
- positive self-efficacy,

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- self-advocacy and leadership skills,
- self-awareness, and
- self-evaluation and reinforcement (Wehmeyer & Schalock, 2001, p. 4).

A person who is self-determined understands personal strengths and limitations, engages in goal-directed behavior, and demonstrates self-regulation and autonomy. Individuals who are self-determined have confidence in their abilities and are able to assume responsibility for their actions.

Self-determination skills can be developed and practiced in nearly any music setting, but particularly in musical ensembles and in groups that require improvising music with others. Ensemble participation requires a level of independence and goal-directed behavior. Participating in ensembles that require individual practice can be an avenue for solidifying skills such as self-regulation and self-responsibility. Establishing independence, setting goals, mastering self-regulation and self-responsibility are all important to leading a self-determined life and supported by research (Deci & Ryan, 2002). In addition, management and organizational skills can be practiced when students assume leadership positions such as section leader or music librarian. Practice in assertiveness, a critical component of self-determination, can be structured for students who serve as student conductor of an ensemble. One of the key factors identified as vital to adult independence and self-determination is personal agency—“taking an active role in determining one’s life path in life” (Nagaoka, Farrington, Ehrlich, & Heath, 2015, p. 28). Taking an active role in determining one’s life path requires choice making, which in turn requires assessing choices with regard to the pros and cons of each possible choice. Research suggests that individuals with disabilities have fewer opportunities to make choices and express preferences for their lives (Argan, Storey, & Krupp, 2010; Stancliffe, 2001).

Learning music skills requires one to make choices about what to learn, when to practice to improve skills and competence, and how to take responsibility for becoming increasingly proficient at a particular music skill. With little to no discussion, most music teachers assign the musical literature their students will learn. Generally, their literature choices are based on the students’ technical skills. Engaging students in a dialogue about their musical skills and how it will impact what they choose to play is excellent practice in self-assessment and making relevant choices. Likewise, discussing personal schedules and determining when to practice or set lesson times is excellent practice for life planning. Finally, discussing the rewards and consequences of making appropriate choices and assuming responsibility for these choices and actions all contribute to personal growth and the development of self-determination.

Along with ensemble participation, opportunities to exercise self-determination are particularly applicable to improvising music with others. Musical improvisation is the creative activity of immediate musical composition, which combines performance with the communication of emotions and instrumental technique as well as spontaneous response to other musicians (Rutherford-Johnson, Kennedy, & Kennedy, 2013). Musical improvisation requires that musicians determine what to play, when to play it, and how to play it, all while being sensitive to their musical cohorts. These are sophisticated musical skills; however, the

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instruments, literature, and music notation can all be adapted or arranged such that even students with minimal musical skills can take ownership of their part, determine how and when they want to play, and assume responsibility for executing their part.

Adam Goldberg, a music teacher in Queens, NY, who works with students who have disabilities, uses iPads® and software such as GarageBand® and ThumbJam to teach jazz improvisation to his students. Fortunately, he has graciously shared online videos illustrating his musical adaptations and arrangements. One such post can be found at <<https://vimeo.com/135218772>>. GarageBand® has many applications such as smart piano, smart guitar, smart strings, and percussion instruments that can all be used to perform standard arrangements as well. It is a valuable app that all music professionals working with older students with disabilities should have on their iPads®. Another excellent example of iPad®'s utility for older students with disabilities can be found at <<http://www.usatoday.com/story/news/2015/02/09/inspiration-nation-teen-plays-drums-with-ipad/23136333/>>.

Smart Guitar, within the app, GarageBand®, has several features that make it particularly useful for older students with intellectual and/or physical disabilities. These features include alphabetic letters that correspond to common guitar chords. With a simple tap on the iPads®, students are able to play chords in a strum style or picking style. Key changes can also be made with a simple tap. In my own classes, students who previously would never have been able to participate in a typical guitar class were able to play using Smart Guitar and alternative notation, right along with their peers. These adapted features also allowed them more options for leisure activities and independence in deciding what music they would play. Clint Randles, a faculty member at the University of South Florida, has a performing ensemble made up entirely of iPads®. Students with disabilities are able to play along with their college-age peers.

### **Musical Experiences to Support Community Engagement**

Participation in music, either actively or passively, can make one's transition to adulthood less stressful and more socially and cognitively engaged. Persons with disabilities often find that transition into community life is easier if they have developed leisure skills that can supplement their social lives (Wehman, 2013). Unfortunately, researchers have found that students with disabilities have limited involvement in extracurricular programs during their school years (Kleinert, Miracle, & Sheppard-Jones, 2007). In one study, 62% of parents of students with disabilities indicated that their child never participated in teams, clubs, and organizations in their school or community (Coster et al., 2012). If students with disabilities are not engaged in music or other extracurricular programs during their school years, they may be less likely to know what similar activities exist for them after high school. Music professionals can make them aware of, and introduce them to, opportunities for music making in the community as part of their music programs.

Music professionals can do much to encourage the continued musical and social growth of students with disabilities by presenting opportunities for music making in the community, both before and after graduation. Community bands, church choirs, open microphone night at various venues, music lessons, and civic choirs are opportunities for active music making. Local concerts at schools, colleges, or community venues, as well as

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restaurants or bars that host musical entertainers are all opportunities for listening to music with others. Such musical opportunities are generally open to all individuals, regardless of musical skills or abilities. Students' engagement in such activities may need to be facilitated by a local musician, music educator, or parent. As part of the transition plan for students with disabilities, music educators can work with students to determine their interests in various community music activities. The necessary skill sets, such as concert etiquette or navigating transportation to various music venues, can be a part of their IEP goals before graduation. Participation in such organizations or performance events may make the transition from school to community life more rewarding and less threatening for older students with disabilities.

The most important factor determining the success of young adults with disabilities to integrate into their communities is the ability to self-advocate. Self-advocacy requires that individuals understand their disability and accept responsibility for seeking assistance when needed. It assumes that individuals are comfortable initiating contact and working collaboratively with others. To be truly integrated in their communities, young adults with disabilities must also take responsibility for developing and maintaining friendships. Participation in an ensemble requires collaboration, and friendships are often a natural outgrowth of playing or singing music with others. Research suggests that friendships can provide a rich and meaningful context for older students to develop self-advocacy skills and self-determined behaviors (Brown & Klute, 2003).

For older students with disabilities, the practice of developing and maintaining friendships is best carried out in low-risk settings. It is important to provide students with a safe place to practice friendship skills. Coaching from a skilled facilitator is also invaluable. In a music ensemble, a friendship facilitator might encourage students to share music with others, call and check on a fellow ensemble member who has been out sick, clap for others when they have performed well, help other ensemble members with their parts or instruments, introduce themselves to new members, and encourage new members to return. Social time can also be built into rehearsals, with icebreaker activities and assignments to find out about one another. Beyond the actual rehearsal time, a friendship facilitator might organize special practice sessions, outings to concerts, and trips to perform in other cities. Activities outside the rehearsal are fertile opportunities for students to develop friendships and to generalize skills learned during rehearsals to the real world.

Research indicates that student participation in nonacademic activities may be linked to better outcomes across a number of domains (National Center for Educational Statistics, 2016). Specifically, participation in extracurricular activities has been associated with a number of benefits, such as enhanced academic achievement, school completion, and psychological adjustment (Mahoney, Harris, & Eccles, 2006), as well as positive long-term outcomes such as increased involvement in social and community activities during early adulthood (Simeonsson, Carlson, Huntington, McMillen, & Brent, 2001). Participation in extracurricular activities has also been related to educational attainment and higher earnings (Lleras, 2008). One study suggested that for students with disabilities, involvement in organizations, sports, and out-of-class activities may help them plan for the future, develop leadership skills and self-determination, engage with their school communities, and develop meaningful and lasting friendships (McGuire & McDonnell, 2008).

Model programs have the potential to draw the lines between research and educational practice; therefore, we would like to conclude this paper with an example of research-to-practice and profile a music program for older students with significant disabilities at The University of Iowa.

### **A Model for Research to Practice: The UI REACH Program and Music Experiences Class**

Of all students with disabilities, those with intellectual disabilities have the poorest post-school outcomes (Grigal, Neubert, & Moon, 2005). Effective programs for incorporating social skill and self-determination instruction into inclusive extracurricular programs can provide a template for with older students in real-world settings. The University of Iowa-Realizing Educational and Career Hopes (UI REACH) Program provides a model that typifies the research and premises discussed throughout the first part of this paper.

Music Experiences is a curricular offering in The University of Iowa REACH (UI REACH) program for postsecondary students with intellectual and learning disabilities and ASD. The UI REACH program was created to provide opportunities for the students to develop and practice skills necessary for future success in an inclusive community environment. These skills can enhance future educational endeavors and professional working opportunities, as well as support successful integration in community activities and programs. The Music Experiences class utilizes music as a foundation for the development of social skills and personal agency to enhance future success in school, work and community engagement.

The University of Iowa REACH program is a 2-year certificate program for college-aged students who have intellectual disabilities, learning disabilities or ASD that interfere with school performance. UI REACH provides a curriculum of core classes that emphasizes life skills and social skills, independent living experiences, academic enrichment and career development opportunities. This unique program is offered on a Big 10 university campus, and the students are fully integrated into the residential, social and community campus life of college students. Specially trained teachers, advisors and counselors support students in academic, social and community experiences.

The typical UI REACH student is 18-25 years old and has learning differences that would make participation and success in a typical college program difficult. These students require disability-related services and supports beyond those provided by most college programs; however, they have the enthusiasm and personal motivation necessary to undertake an intense educational experience. UI REACH students are independent in most daily living skills such as hygiene, room care and medication management. They have had some experience with computers and other technology and they are interested in exploring appropriate career and workplace skills for their future success. The overarching goal for UI REACH program is to help students gain increased self-sufficiency and independence. Program standards are broken down into goals related to academic and life skills, career skills, independent living skills, leisure and social skills, as well as practicing self-advocacy and self-determination (Hendrickson, Carson, Woods-Groves, Mendenhall, & Scheidecker, 2013). Table 1 provides a clear overview of these goals and descriptions of related skills.



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**TABLE 1:**  
*UI REACH Program Standards*

<u>Program Goals</u>	<u>Description of Skills</u>
Academic and Life-Long Learning	Demonstrates life-long learning skills, including practical academic skills
Career and Vocation	Demonstrates understanding of individual career exploration and vocational preparedness
Community and Leisure	Demonstrates preparedness for community life and leisure activities
Independent and Daily Life	Demonstrate competence in independent and daily living skills
Self-Advocacy and Self-Determination	Demonstrates the use of self-advocacy and self-determination skills
Social and Interpersonal	Engages appropriately in social and interpersonal interactions

### **Music Experiences Class as a Part of UI REACH**

Music Experiences is a music class that is a part of the curricular offerings in the UI REACH program. This class is a collaborative effort between The University of Iowa Music Therapy program faculty and the UI REACH program faculty and staff. This class utilizes music as the foundation for building social skills and self-determination skills. It is an elective for first- and second-year UI REACH students who have expressed an interest in music, and students who have been identified as students who may benefit most from the class. The goals of the Music Experiences class are based on the program standards and goals of the UI REACH program, and Music Experiences sessions are designed to address the stated goals through music engagement. Functional target behaviors are identified for each of the program goals to help focus the music interventions and to link music learning with the non-music program goals. (See Table 2 for the goal area and functional target behaviors related to each area.) Active engagement in music provides opportunities for students to practice the skills that they work on daily in their educational program. The students are generally eager to be involved in the Music Experiences class, and they find the music activities to be engaging and motivating.

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**TABLE 2:**

*Music Experiences Goal Areas And Sample Functional Target Behaviors*

<u>Academic</u>	<u>Career</u>	<u>Leisure</u>	<u>Self-Determination</u>	<u>Social</u>
Focus of attention	Focus of attention	Learning new skills	Offering ideas	Sharing about self
Problem solving	Problem solving	Performing for others	Leadership	Working with others
Learning new concepts	Trying new experiences	Practicing outside of class	Taking risks	Taking risks

Music activities are designed to align with the program goals and functional target behaviors for individualized instruction. In order for the UI REACH students to come to class, stay engaged, and practice skills they need to be motivated by developmentally-appropriate and age-appropriate music experiences. Music engagement is structured through singing, instrument playing alone and with others, movement/dancing, improvisation, composition and conducting. We use familiar and popular music, interesting instruments such as djembe drums, guitars (adapted when necessary), tone chimes and instrument apps on iPads®. All music activities are created to appeal to college age students and are adapted to meet the individual needs of students with disabilities.

The discrepancy between the chronological age of the UI REACH students and their developmental abilities is one of the most difficult aspects of working with this group. Since these students have learning difficulties, the music skills must be broken down to meet the developmental and learning abilities of the UI REACH students. However, the students are college students who deserve to be treated like young adults who have interests, musical tastes, and life experiences similar to other college students. Scaffolding is used to provide the necessary supports for learning, with gradual elimination of these supports as the student becomes increasingly independent. Examples of these additional supports include using visuals for notation practice, using color-coding or numbering for playing chords on a keyboard or tone chimes, and adding rhythmic clapping by the group to help a student play a notated rhythmic phrase. The scenarios in the following sections provide some specific examples of additional support that have been used in class.

Music therapy students and faculty are involved in this model program due to the nature of this collaboration at The University of Iowa. These Music therapy students have knowledge about the needs and abilities of individuals with disabilities and they have experience working with people with varied skills. They also have strong music skills and understand how to

develop music interventions that are congruent with the students' developmental skills while being age appropriate for this older student population. While the focus of this class is to practice skills necessary for future successes, we do this through active engagement in music and music learning. Music educators who have a background working with individuals with disabilities might also have the necessary skills to work with this particular class, or other classes in similar educational or community programs. Many music educators are now being trained to understand the specific needs of students with varied abilities, and they acquire skills to develop music learning activities to best meet the needs of these students. Although music learning would likely be the primary focus of a music education program, secondary outcomes can be closely related to the non-music goals of social skill development and self-agency.

### **Creating an Appropriate Music Learning Environment: Autonomy, Mastery and Purpose**

Motivation, engagement and learning can suffer when music experiences do not match the age and ability level of the students. Music activities that are preferred, interesting to students, and at an appropriate level of complexity can enhance students' motivation to try new and challenging tasks. Educators can take a lesson from the business world regarding motivating students to achieve success in school and later in life. According to Pink (2009), there are three elements that one must consider to promote personal satisfaction and improved performance. These three elements are autonomy, mastery and purpose. As educators, we can think about this model to create an environment that results in the utmost student engagement and outcomes. In the music setting, autonomy is related to providing the student with many opportunities for choice making and independence. This means that the music tasks need to be flexible with choice-making opportunities, and they need to be broken down into achievable steps for the students. Mastery could be related to how information is presented to enhance learning and providing the appropriate opportunities for practice to develop the skills. And purpose is making sure that the students know what they are learning and why they are working on these skills. The music professional is responsible for creating music activities and strategies that help students achieve the highest levels of autonomy and mastery of the curriculum, guided by a clear purpose for why these experiences are meaningful for the students. While this is true for all ages of student, music professionals may be challenged when asked to create curricula and implement interventions that provide autonomy, mastery and purpose when working with older students who have learning challenges. Table 3 lists ideas for how to implement these curricular concepts. By thinking through the ideas in this table, music professionals can design learning opportunities and also assess their teaching approaches to determine if they are addressing the concepts in their curricula.

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**TABLE 3:**  
*Autonomy, Mastery and Purpose*

<u>Autonomy</u>	<u>Mastery</u>	<u>Purpose</u>
Provide leadership opportunities	Focus on developmentally appropriate skills	Clearly state what students are learning
Obtain ideas from individuals/group consensus/ allow choice making	Provide visual/auditory/ kinesthetic supports for learning	Share reasons why you chose to work on specific skills and activities
Obtain buy-in from the group	Utilize repetition. Build skills over time	Clearly state what else they can learn after learning preliminary skills
Provide scaffolding for learning more complex or challenging information/ skills	Provide scaffolding for learning more complex or challenging information/skill	Provide opportunities for students to reflect on personal benefits from this learning

Although this paper is focused on the use of music to enhance skills for older students, all arts professionals can consider these three concepts as they develop strategies to enhance engagement and successful arts experiences. The following section addresses common questions about the concepts of autonomy, mastery and purpose to help increase motivation and work on the important transition skills needed for future life successes. In addition, scenarios are included to highlight how these concepts were demonstrated in the UI REACH Music Experiences classes.

### **In what ways am I providing opportunities for my students to demonstrate autonomy?**

Autonomy in the music environment can mean that the student has frequent opportunities to make meaningful choices about curricular tasks such as what music they learn or what instruments are used. They can freely offer ideas to the group, and they can take on leadership opportunities within the classroom setting. Along with these student-driven tasks, the music professional has a responsibility to teach the appropriate skills in a way that the

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student can learn to be as independent as possible when using the skills. Teachers can create opportunities for students to have autonomy. When music professionals are able to break down a skill to meet the learning needs of the students, and do this in an engaging way, the student is more likely to learn the skill and be able to build on it in the future. The students will not understand the information or how to proceed to a successful musical outcome if the process for learning the skills is too complex or abstract. If the student continually needs assistance, he or she will lose motivation and ability to build on the skills in the future. When tasks are taught with the appropriate level of complexity, the student is more likely to have autonomy and increased motivation and interest.

*Scenario: The students in the UI REACH Music Experiences class were getting ready to learn to read rhythmic notation in order to read rhythms, play as a group, and create their own rhythms and rhythmic compositions. The teachers presented the information in terms of fractions, such that a quarter note is  $\frac{1}{4}$  of a whole note, a half note is  $\frac{1}{2}$  of a whole note, etc. The teachers thought this was an easy and concrete approach, and it made perfect sense to these seasoned musicians. This might have been the way that they were taught note values long ago, and to them, it seemed pretty basic. The UI REACH students were not able to understand this approach since they did not understand the abstract concept of fractions. The novice teachers who were leading the Music Experiences class were teaching these concepts as they were taught, and they thought they were breaking the concept down to the smallest levels, but they were far from the most basic levels. They had to rethink how to teach rhythmic notation in a more basic, concrete, non-abstract manner so that the UI REACH students could grasp the concept, practice the skill and move on to create their own rhythmic compositions on their own. This required additional scaffolding and support as the UI REACH students learned the basics of reading rhythms, and then some of these supports could be faded as the students understood the concepts and became more skilled. Supports included filling in blanks for notation, using chanting/words to represent note values, and limiting the length of the notation to four beats (with a space for each beat, i.e., \_ \_ \_ \_). Initially students knew that they could use a ta (□, quarter note) or ti ti (□□, two eighth notes) for each space.*

The UI REACH students were able to be independent because the skills were broken down into information that was understandable, concrete, accessible to them, and age appropriate. They were also able to use these as building blocks for creating additional rhythmic compositions and improvisations that increased in complexity, but maintained some of the original support, such as the spaces for each beat.

### **In what ways am I providing opportunities for my students to demonstrate mastery?**

In order for students to master the information and music skills, the skills need to be developmentally appropriate but also taught in an age appropriate manner. Music professionals may need to provide visual, auditory and kinesthetic supports for learning, along with repetition to help students build the skills over time. Mastering a difficult task can give the student the confidence and motivation to engage in other learning tasks that might be challenging in the future.

*Scenario: The UI REACH Music Experience students were presented with the opportunity to submit a dance video to the World Dance Day website. In order to do this successfully, the students needed to create, learn, practice and perform an original dance. With structure and guidance from the teachers, the UI REACH students worked for part of the class for 8 weeks to develop and master their dance routine. Repetition, building skills over time, group feedback and external support by peer models helped the UI REACH students achieve their goal and submit a dance video to share with the world on the international website. They had great pride in this accomplishment and showed the video to their families and friends at their program graduation party at the end of the semester.*

Mastery is developed over time, and repetition may be an important element in order to achieve mastery. Repetition can get boring, so music professionals need to creatively vary the experiences in a way that maintains focus and motivation, yet still works on the essential skills. This can be done using a variety visual, auditory and kinesthetic resources and experiences that continually focus efforts on the skills being learned and practiced.

### **How do I make sure that the students in my music class understand the purpose of what we are doing?**

The best way to make sure students know why they are learning a skill, practicing an instrument, or writing music is to talk about the purpose. Learning goals should not be a secret, but an agreed upon and understood reason for engaging in the particular learning experience. Students should have an opportunity to answer some of the following questions. Why are we doing this? What will we get out of it when we have accomplished our goals? What will we be able to do because of learning this skill? In addition to the music skills, what life skills are we learning and practicing along the way? UI REACH students were able to answer these questions when they were posed within the framework of the specific skills and activities from Music Experiences class. They were highly motivated to engage in their learning, even if they were tired or the skills were especially challenging, as long as they understood that there was a purpose beyond just learning note values or dance steps.

*Scenario: Each week the UI REACH students learn and practice some basic music skills such as learning rhythmic concepts, composing rhythmic phrases, and playing rhythms on djembes in a group. The students were challenged by the level of difficulty even though they did not go beyond eighth, quarter, half and whole note rhythms. After they mastered the concepts of the individual notes, the students were able to create rhythmic phrases and then play the phrases together with others on the djembes. The group leader always discussed with the students why they were learning these rhythms. On one hand they were learning the rhythms to be able to play the drums or other instruments with others and make music together, which is a great reason unto itself. But they also talked about how these skills fit into their curricular program goals of leadership, getting along with others, listening to others, and taking pride in one's accomplishments. After a particularly difficult experience with the rhythms, and after several rounds of repetition, one of*

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*the students looked up and said, “That was really hard, but I DID it!” with a huge grin on his face. He understood that the music making was fun, but also he understood that he was able to overcome the challenges of the rhythms by practicing many of the skills he works on daily in his UI REACH program.*

The UI REACH program provides opportunities for students to develop and practice skills for successful engagement in educational, vocational and community activities. The Music Experiences class helps students practice these important skills through engaging and motivating music making activities. Due to the structure and focus of the class, along with the support provided as needed, UI REACH students are able to make music with others with independence and autonomy, practice and master music skills, and understand the outcomes and purpose for doing the music activities. Transition skills can be developed and supported through this type of music experience. In classes such as this, students learn foundational music skills that can also contribute to community engagement with others who want to make music.

### Summary and Conclusions

The transition from high school to the world of work or postsecondary education is a major life change. The years after high school can be particularly challenging for persons with disabilities who may not possess the personal skills needed to manage their lives independently. While personal autonomy and independence are the ultimate goals for young adults with disabilities, many individuals will need support during the transition to adulthood and retooling of skills through the years after. Assistance may be only occasional check-ins with the individual or ongoing programs designed to address or reassess both personal and career goals. Goals that are person-centered and set in consultation with the individual are generally met with enthusiasm and are ultimately the most attainable. Musical experiences can be used to facilitate the attainment of personal or career goals or as the ultimate goal of a program.

Structured music activities for young adults with disabilities can be enjoyable, motivating, flexible, and challenging while providing opportunities to practice important life skills that will be beneficial in social and employment settings. The UI REACH program curriculum for postsecondary students with intellectual disabilities, learning disabilities, or ASD includes music classes that provide such experiences for the participants. The music program serves as a model for music professionals regarding ways music can be used to make the lives of young adults with disabilities more socially and cognitively engaged. Students in the Music Experiences class have the opportunity to learn about music and make music with others in an environment that is created to best meet their learning and transition needs. This model program demonstrates some of the ways that music can be used to practice skills leading to independence, problem solving, social engagement, and personal agency. With the increasing numbers of students with ASD and intellectual disabilities graduating each year, the need for similar programs will also increase. Training music professionals on how to best serve these graduates and how to make their lives after high school rewarding and successful will be the next challenge for college music and community music training programs. That task will ultimately prove to be immensely gratifying for those involved in these training programs and exceedingly beneficial to individuals with disabilities and their communities.

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# The Musical Working Game

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**ABSTRACT:** *This paper will explore the Musical Working Game (MWG), a group format of the Nordoff-Robbins Music Therapy tradition, that integrates a variety of affective and artistic modalities into a single experience designed to address the social-emotional and developmental needs of special education students. First, the developmental capacities necessary for scholastic success will be explored using Dr. Stanley Greenspan's model, DIR®/Floortime™. The particular elements of a MWG will then be defined from a historical perspective, which will discuss its inception and original application by two music therapy pioneers. This is followed by the author's process of constructing and implementing a new MWG with three cohorts of students at a school in New York City for children and adolescents with developmental disorders of relating and communicating. Finally, the developmental and social-emotional benefits of the group will be assessed.*

There has been a growing attentiveness to special education over the past decades, perhaps as a result of shifting philosophies regarding the rights of disability groups, as well as an apparent increase in diagnoses of particular populations with disabilities, including autism spectrum disorder (ASD) (Fakhoury, 2015). With this shift has come a burgeoning consideration, not only for academic success, but also for the social-emotional and developmental needs of students with learning differences. Indeed, research indicates that the social-emotional and academic realms of all students are closely intertwined (Elias, 2009; Zins, Bloodworth, Weissberg, & Walberg 2004). Further, the educative and clinical use of the arts has proven to play a crucial role in supporting students with learning differences in areas of social-emotional development (Deasy, 2002; Hallam, 2010; Nordoff & Robbins, 2004).

The research is quite robust in detailing the areas of social-emotional development that participation in the arts can support, including emotional exploration (Godfrey & Haythorne, 2013; Lewis & Banerjee, 2013), social collaboration (Corbett et al., 2014) and cognitive development (Van Volkenburg, 2015). These areas of development have been explored within the context of a wide range of dramatic experiences, such as creative dramatics and role adaptation (Tricomi & Gallo-Lopez, 2012), story telling (Craig, Hull, & Haggart, 2001), and performance in plays (Shaughnessy, 2012).

However, little attention has been paid to a unique artistic format, first developed in 1959 by music therapy pioneers Paul Nordoff and Clive Robbins, called the Musical Working Game (MWG) (Nordoff & Robbins, 2004). There are particular aspects of the MWG that distinguish it from other methods previously explored and researched, most notably, the integration of a wide range of expressive elements into a single experience, including story telling, role adaptation, music, and a practical game. It is in the integration of these elements, all of which come together in a process-oriented and weekly recurring therapy group that creates a unique and highly motivating opportunity to address the social-emotional needs of students with developmental differences.

### Developmental Needs Addressed by the Musical Working Game

Theoretical claims regarding the therapeutic benefits of the MWG have been previously explored (Nordoff & Robbins, 2004). This paper serves to further examine not only the therapeutic benefits, but also the developmental needs addressed by the MWG, which are so closely intertwined with academic success. The developmental capacities addressed by the MWG can be understood within the context Dr. Stanley Greenspan’s developmentally-informed model, DIR®/Floortime™. In this model Dr. Greenspan identifies a series of functional emotional developmental capacities (FEDCs) that create the necessary foundation for social, emotional, and academic success (Greenspan & Tippy, 2011). They exist along a growing continuum, meaning each subsequent FEDC builds upon the previous one. The MWG primarily addresses the first three FEDCs identified by Greenspan:

FEDC1—*Shared attention* is the ability of two people (e.g., a child and caregiver) to focus on the same object or theme and is a crucial step toward a world of joint human activity. Individuals with developmental differences have been noted to struggle in this capacity across a range of domains (Mundy & Sigman, 1989), often as a result of sensory processing challenges (Case-Smith, Weaver, & Fristad, 2014). These challenges may result in a repertoire of sensory-seeking and/or avoidant “behaviors,” which create a barrier to the person’s ability to take interest in the plethora of sights, sounds, and people in the world (Watling & Hauer, 2015).

FEDC2—*Engagement* is the ability to feel close and emotionally connected to another (Greenspan & Wieder, 2006). It marks the world of human contact and motivation in relationships. This capacity manifests in the shared affect between two or more people around something pleasurable and motivating. Due to challenges in processing sensory information, as well as reading affective cues from adults, some children with developmental differences may have trouble engaging meaningfully (Lozier, Vanmeter, & Marsh, 2014).

FEDC3—*Purposeful emotional interaction* is the ability to communicate intentionally through gestures, facial expressions, and eventually, language. This capacity characterizes the ability for two individuals to exchange meaningful information—to actively collaborate around a joint endeavor, e.g., cooing, pointing, commenting, and/or conversing. When the capacity to share attention and engage meaningfully is hindered, communication development in individuals with ASD may be affected as well (Stone, Ousley, Yoder, Hogan, & Hepburn, 1997; Mundy, Sigman, & Kisari, 1990).

By focusing on the cultivation of these capacities in students who do not develop them naturally, educators may support growth in a multitude of realms. Greenspan and Wieder (2006) write: “Mastery of these stages is essential not only for normal emotional development but also for cognitive development, higher-level thinking, and a fully developed sense of self” (p. 41). These capacities are like muscles: they need to be continually worked in a variety of domains across a range of contexts if they are to be strengthened and mastered.

### The Elements of a Musical Working Game: A Historical Perspective

The original MWG marked an attempt by a special educator, Clive Robbins, and an American composer, Paul Nordoff, to offer an experience that would support a challenging

classroom of special needs students at a residential school in the UK (Robbins, 2005). This collaboration grew out of an initiative to explore the use of arts-based practices to help educate children, resulting in a new form of artistic endeavor that incorporated a milieu of motivating elements, including storytelling, role adaptation, music, and a game, all built around the Grimm folk tale *Pif-Paf-Poltrie*. Each element in tandem plays a crucial role in offering a unique and satisfying experience that ultimately supports students in the core FEDCs.

In the original MWG, Clive Robbins designed an engaging narration of *Pif-Paf-Poltrie*, an unassuming story of a besom-binder looking for a wife, whereby storytelling becomes the backdrop for all the other expressive media to come to life. The content and affective telling of the story gives the MWG a direction and brings purpose to the gathering of the group.

However, The MWG is much more than an adult-directed storytelling endeavor. The group is organized into a large circle and students are encouraged not only to listen, but also to participate actively by taking on the role of the characters in the tale. Robbins used content from the original story to create scripted movement and dialogue for each character, which is to be performed in the middle of the circle of observing students. The result is a weaving of narration offered by the group facilitator with scripted action performed by the participants.

With the above elements, a valuable experience is already in place for a group of children to come together meaningfully. The affective elements of storytelling, in partnership with role adaptation, may support a child's ability to share attention, engage, and collaborate purposefully in a joint artistic endeavor. Yet, the experience is critically enhanced through the composition of songs, chants, and instrumental music to enliven each aspect of the drama. An accomplished and creative composer, Nordoff paid an incredible amount of attention to the construction of the music for the MWG. For example, he was very careful to integrate the natural rhythms of the children's speech into the dialogue set to songs. Nordoff and Robbins (2004) describe this exploration further:

For the action songs it was discovered that their movements were best supported by music in which the harmonic element was as active as the tempo and rhythm. The deliberate, judicious use of dissonant harmonies had a liberating effect on the children...the dissonances not only enabled them to march and move with more vigour, but helped them to learn and remember the words and melodies. (p. 21-22)

In 1959, this was new territory being explored. Never before had such thought and deliberate compositional creativity been put into a program designed for children with disabilities (Robbins, 2005). The effect was astonishing and the team realized that the carefully crafted music inspired participation from the students in ways they could not have imagined. Nordoff and Robbins (2004) write: "Throughout the game, through the dynamic mood of the music, [the children] would awaken to the situation in which they found themselves" (p. 22).

When it was first suggested to Robbins and Nordoff to create an experience out of the tale, they were also encouraged to make it into a practical game (Nordoff & Robbins, 2004). Robbins incorporated the game element through *Pif-Paf-Poltrie*'s profession as a besom binder. The group begins with the facilitator playfully making a mess of leaves on the floor in the middle of a circle of students. A besom, made from broomcorn tied together with string

on a long wooden stick, is also taken apart, which is strewn vividly over the leaves. As the story unfolds and Pif-Paf-Poltrie is recognized as a besom binder, all of the children help to collect the broomcorn, and the child playing the role of Pif-Paf-Poltrie, together with the group facilitator, tie the besom back together. This is followed by the game's climax, in which Pif-Paf must sweep all of the leaves into a tidy heap. All of the action, i.e., the work of Pif-Paf-Poltrie, is supported by engaging songs and encouraging sweeping music.

### **On Constructing a New Musical Working Game: “Siggy the Seeker”**

The tradition of Pif-Paf-Poltrie has made its way into the work of Nordoff-Robbins trained music therapists over the past several decades. In 2002, at the Nordoff-Robbins Center for Music Therapy at New York University, therapists conducted Pif-Paf-Poltrie with a group of preadolescents with a range of developmental differences (A. Turry, personal communication, June 23, 2016). In 2014, the present author, in collaboration with another Nordoff-Robbins music therapist and special educator, led Pif-Paf-Poltrie with groups of students at Rebecca School, a therapeutic day school for children and adolescents with neurodevelopmental disorders of relating and communicating in New York City. The developmental and therapeutic benefits originally recognized by Nordoff and Robbins (2004) were also observed by the contemporary practitioners.

On the heels of Pif-Paf-Poltrie's success in cultivating a meaningful learning experience, the present author sought to supplement the repertoire by writing a new MWG, to be implemented at Rebecca School with three cohorts of students: ages 4-8, 9-14, and 15-20. This was part of an effort to broaden the scope of the music therapy practice at the school, which was largely focused on long-term individual therapy. In addition, it marked an attempt to explore innovative ways of using the arts to offer meaningful group experiences, as individuals with communication and relational challenges struggle to share attention, engage, and collaborate with their peers (Locke, Ishijima, Kasari, & London, 2010). In this new endeavor, the foundational elements found in Nordoff and Robbins' original MWG—*storytelling*, *role adaptation*, *music*, and *game*—were used as a point of departure for creation.

### **The Game**

In composing the new MWG, the practical element—the game—was considered first, as this author felt strongly about the type of game that would resonate with a wide range of individuals along the developmental spectrum. A story would then be chosen that could effectively feature aspects of the game, along with narration, dialogue, and music. Within a play-based intervention like DIR®/Floortime™ (the treatment model adopted by Rebecca School), the focus of academic and therapeutic programs incorporates developmentally-informed play/game experiences specifically designed to work on a range of FEDCs (Greenspan & Wieder, 2006).

Children in earlier stages of development assemble meaning of the world through anticipation games such as peek-a-boo and hide-and-seek (Greenspan & Tippy, 2011). The basic premise is that children who have yet to master the foundational developmental capacities find these types of games naturally engaging and meaningful. These games

often speak to the emerging ability to grapple with object permanence—the realization that things continue to exist in time and place even when they are no longer visible (Bruce & Muhammad, 2009). Therefore, an instinctive bout of anticipation builds in a child when something motivating goes missing (e.g., a teacher’s face behind her hands), followed by a feeling of excitement and satisfaction when that “motivating something” reappears. Within this exchange, the core FEDCs are being addressed: the child attends to the movement and actions of the teacher, engages through sharing affect around the feelings of anticipation and excitement, and becomes a purposeful collaborator by signaling (through gestures, affect, and vocalization) to the teacher to remove her hands from her face.

The basic component of this classic and universally evident game of peek-a-boo can be adapted and modified in many ways to engage a wide range of individuals. The allure of games like hide-and-seek, scavenger hunts, and even Whack-a-Mole® all draw upon the inherent human attraction to the ongoing undulation of things leaving and returning within our tangible sensory experience.

This concept became the cornerstone of the new MWG. It would begin with the hiding of a motivating object(s), perhaps in a large bin(s) of sensory-friendly materials (e.g., sand, dried rice, etc.). It would be the responsibility of the main character to find the missing objects as the content of the story and action unfolds. Only until the objects are found can the experience continue and conclude, hence the “work” in the game. Again, the content of this type of game expresses a natural motivation in a wide range of individuals working at these lower FEDCs. Greenspan and Wieder (2006) discuss how feeling motivated lays at the heart of productive and effective developmental work: it “gives children a sense of purpose or direction in their actions” (p. 67), which contrasts with other treatment models where children are often conditioned (through a behavioral modification program) to participate in the world. When naturally motivated, children participate because they want to join, leading to a more meaningful and potentially transformative experience (Krapp, 1999).

### The Story

With a rough sense of the game that would be played, it was important to find a story that could accommodate the element of finding an object. Peter Sis’ book, *The Three Golden Keys*, is the story of an old man by the name of Siggie (this name was adapted by the author to neutralize gender in the original story) who revisits the city of his childhood in a dreamlike state. Upon his arrival, he immediately goes to his family’s house where he finds three padlocks on the door. Of course he wants to go inside but cannot without the three keys that will unlock the door. And so, with the help of the Little Black Cat (his old family’s pet) he ventures throughout the city to find the keys. As he makes his way through the city, memories of his childhood are conjured and upon arriving at three particular destinations (the library, the garden, and the clock tower) a golden key is given to him by each of three characters, i.e., the Librarian, the Groundskeeper, and the Baron. With the three golden keys in his possession, he is finally ready to return home. The story ends with Siggie eagerly returning to his old house, where he is met with a sentimental memory of his mother preparing dinner.

Many aspects of this story lend themselves to the creation of a successful MWG. For one, initially missing and subsequently finding the three keys was an appropriate platform for the desired game element. Three keys would be hidden in three separate bins in the middle of the circle, which would have to be found by the main character as the story unfolds. The story also provides a range of characters for multiple students in the group to play: a protagonist (Siggy) and a supportive role (the Little Black Cat), along with the Librarian, Groundskeeper, and Baron, who came to be called the “Keepers of the Golden Keys.” Furthermore, the story has an amusing opening and closing, with an internal structure that repeats three times, a form found in many popular children’s stories such as *The Three Little Pigs*, *Goldilocks and the Three Bears*, and *The Three Billy Goats Gruff*.

### Role Adaptation

While the gist of the story was maintained, the language used to write the group facilitator’s narration and the dialogue to be spoken by each character was adapted so that the content would be accessible to the wide range of students being served. Both receptive and expressive language deficits often accompany individuals with communication and relational differences (Tager-Flusberg, 1981), which meant paring down many details of the story and simplifying the dialogue for each character to recite. To support successful recitation of the lines, the discourse was kept succinct and made playful with singsong, rhyming qualities (not present in the original book). For example, the role of Siggy is instructed to recite the following lines when he arrives home for the first time and notices the locks on the door:

*Siggy:                                    I want to go home, I need the three golden keys  
    It’s such a big city, where could they be?*

The dialogue between characters was also constructed in this manner. Below is an example of the exchange between Siggy and the Groundskeeper (Keeper of the Second Golden Key) just before Siggy searches the bin for the key:

*Siggy:                                    I want to go home, but three locks on the door  
    It’s a golden key, I am searching for!*  
*Groundskeeper:                        Here in the garden, lies the second golden key  
    Through the trees and the leaves, you will search and see!*

The discourse structure was maintained within each exchange between Siggy and subsequent Keepers of the Golden Keys, utilizing repetition to support mastery of the content. For example:

*Siggy:                                    I want to go home, but three locks on the door  
    It’s a golden key, I am searching for!*  
*Baron:                                    Here in the clock tower, lies the third golden key  
    Up high in the bells, you will search and see!*



Role adaptation extends beyond the recitation of lines. Simple costume pieces and props are utilized to inspire greater identification with the characters. Each character is distinguished by a particular hat or headpiece, a recommendation astutely given by the supporting educational supervisor. Siggy is given a flat cap with a matching fanny pack to hold the keys he would find along the way. The Librarian, Groundskeeper, and Baron are given a beret, straw hat, and bowler cap, respectively, and the Little Black Cat is aptly given cat ears and a tail. Two students are asked to play “the childhood home,” which requires them to hold up a rectangular tablecloth with a slit up the middle, fastened by three pieces of Velcro® to represent the three locks on the door.

Children are provided with a set of expressive movements to accompany moments of discourse in order to support further embodiment of each character. For example, as the Baron states, “Up high in the bells...” the student is encouraged to point his hand high up in the air and visually follow the direction of his finger. In another example, Siggy is encouraged to follow the footsteps of the Little Black Cat as they weave among the bins in the center of the circle of students between each encounter with a Keeper. Movement is also incorporated for the observing students in the perimeter of the circle who do not play a role for that particular week. For example, at the very beginning of the experience, Siggy takes a ride in a hot air balloon and stumbles upon the city of his childhood after he is whisked away by the winds of a strong storm. As the group facilitator narrates the moment when the storm comes, the students are encouraged to stomp their feet quickly, wave their arms in the air, and repeatedly shout, “*Swish! Swoosh!*”

### The Music

The original book did not contain any lyrics or songs, and yet music lies at the heart of a MWG. As a result, instrumental music, songs, and rhythmic chants were composed within the Nordoff-Robbins musical framework to highlight and enliven critical moments of the drama. Aspects of the Nordoff-Robbins musical tradition include the intentional use of harmonic and rhythmic dissonance, abstruse harmonic voicing, compelling melodic contour, and a range of musical moods to express the diverse affective content of the story (Nordoff & Robbins, 2007). To note, all of the music was written and accompanied on piano, which is situated beside the group narrator in the perimeter of the circle.

Below is a detailed description of the musical selection that accompanies each portion of the unfolding dramatic content. Some technical musical language is used in an attempt to capture the quality of the music through words. While written language falls short of capturing the actual experience of music, a description is still necessary to emphasize the amount of attention and creative thought that was lent in crafting the musical portion of the experience, in addition to how critical the musical element is to the essence of the whole experience.

***Hiding Groove.*** Once all the students are settled in a circle, with three large bins in the center, the narrator, who stands beside the bins, reveals three antique keys in hand. A two-measure, funk-style groove is played on the piano, with a space in the music for the students to shout, “Uh oh!” A descending, harmonic progression then accompanies the sung phrase, “Look there she’s hiding the first golden key!” as the narrator dramatically places the first key

in a bin. This is repeated two more times for the remaining keys, after which each character is chosen for that particular day.

**Introductory Music.** As the narrator begins the story, “It was a beautiful day, when Siggy, an elder of his time, began his ride in a hot air balloon...” pentatonic melodies are played in the upper register of the piano to capture the sense of “air” and “flight” in the narration. The music then suddenly changes when the narrator continues, “...but as the clouds rolled in, the winds picked up...and they grew stronger!” To affectively embody the oncoming storm, dissonant tremolos (using minor second intervals) are played in the lower register, while an ascending sequence of atonal melodies is played in the upper register.

**Where Oh Where!?** This is the first vocal song of the experience, which is sung by all of the students following Siggy’s important line as he notices the three padlocks on the door to his childhood home: “I want to go home, I need the three golden keys, it’s such a big city, where could they be?” After a short, piano introduction, the following lyrics are sung to a pleasing, diatonic melody using inverted harmonic voicings to offer a sense of incompleteness and intrigue in the upcoming pursuit of searching:

*Where Oh Where are three golden keys?*

*Where Oh Where? Where Oh Where?*

*Where Oh Where could they be?*

A sense of intrigue is further supported by an unresolved melody at the conclusion of the song. While the harmony cadences to the tonal center, the melody rises at the end and concludes on the fifth scale degree (as opposed to the tonic), which offers a feeling of musical instability.

**Hum Ho! Siggy Go!** The narrator then calls upon the Little Black Cat “...to lead Siggy out on the streets of the city” in pursuit of the first golden key. At this time, Siggy is instructed to walk behind the Little Black Cat as she weaves between the bins that hold the keys. The song has a strong rhythmic character to inspire movement, which begins with a harmonic minor chord progression and charming lyrics to offer a contrast in mood and capture the atmosphere of the windy streets:

*Hum Ho! Siggy Go!*

*Hum Ho! Siggy Go!*

*Tippity-tap behind that, Little Black Cat!*

However, the song modulates harmonically to the parallel major, as well as changes from a strong 4-4 meter to a wondrous waltz, to accompany the change in mood offered by the following lyrics:

*Winding, winding through the streets*

*Memories they come back to me*

**Search Chant.** After walking through the streets, Siggy encounters the Keeper of the First Golden Key. The two characters engage in the instructed dialogue, which is offered as a call-and-response with the narrator. This is followed by a rhythmic chant to accompany the role of Siggy searching in the bin for the golden key. The lyrics are instructed to be chanted rhythmically, while the piano supports with a single, repetitive note played in the lower register on each downbeat, coupled with a syncopated descending harmony between the minor I and major VII chord. In addition, the chant unfolds over a crescendo (progressively getting louder) to assist in building the anticipation while Siggy diligently searches for the key.

*Search! Siggy, Search! You will find it! You will find it!*

*Search! Siggy, Search! You will find it! You will find it!*

*Dig with your hands and soon you will see....*

*That you will find the first golden key!*

This is repeated energetically until Siggy finds the key in the bin of sensory-friendly materials.

**Look Who Found the First Golden Key!** Once Siggy locates the key, the piano immediately moves into the next song. This moment of great celebration as Siggy has just worked so persistently is met by a driving, syncopated bass line and spirited harmony. The students are led into a festive moment of free dance as they sing congratulatory lyrics to an animated and catchy melody:

*Look who found the first golden key, the first golden key, the first golden key!*

*Look who found the first golden key, the first golden key, the first golden key!*

In a moment of call-and-response between the group of students and the role of Siggy, the antiphonal phrases are punctuated by a single, accented chord:

Students: *Look who found it!*

Siggy: *Yes! I found it!*

Students: *Look who found it!*

Siggy: *Yes! I found it!*

The song concludes with a decelerando (slowing down) as everyone comes together to sing the final lyrics:

*Siggy found the first golden key, woahhhhhh*

*Siggy found the first golden key*

The structure of the previous three songs (*Hum Ho*, *Search Chant*, and *Look Who Found*) are repeated two more times as Siggy and the Little Black Cat meet the subsequent Keepers, accommodating the lyrics for the number of the golden keys Siggy is searching for.

**The Key Chant.** Once Siggy has located all three golden keys, with the Little Black Cat by his side, he returns to his childhood home to unlock the door. Before entering, the narrator leads the students in an antiphonal, rhythmic chant to acknowledge Siggy's success. Siggy is instructed to remove each key from his fanny pack and proudly place them in three small, aluminum buckets (symbolizing the locks) successively in coordination with the repartee:

Narrator:                *Siggy found the first golden key! Does it fit?*

Students:                *Oh yes!*

Narrator:                *Does it fit?*

Students:                *Oh yes!*

Narrator:                *Siggy found the second golden key! Does it fit?*

Students:                *Oh yes!*

Narrator:                *Does it fit?*

Students:                *Oh yes!*

Etc.

**Home.** Here lies the culmination of Siggy's diligent efforts, the reason why Siggy has searched for the golden keys in the first place: He wishes to return home. After the group slowly chants, "The door opens wide and Siggy steps inside..." an ascending arpeggiated piano phrase on a dominant seventh chord signals the start of the final song as Siggy steps through the opening of the house (i.e., the slit in the tablecloth). Because the story ends with a feeling of nostalgia for childhood memories, the final song was composed with a sense of sentimentality. Lush harmonies, played in a slow tempo and soft dynamic, accompany a sensitive melody and the following open-ended lyrics that are repeated:

*Home, Siggy made it home*

*How does it feel? How does it feel?*

*How does it feel to come home?*

### Observed Developmental and Social-Emotional Benefits

The purpose for creating such a group is, at its core, developmentally focused, while also catering to the emotional needs of vulnerable learners. This means that the MWG is designed not only to support students in exploring greater developmental potentials, but also to gain new experiences of themselves as maturing human beings. Many educators and treatment professionals, including Deci, Vallerand, Pelletier and Ryan (1991), emphasize the need for programs that support confidence and feelings of competence in students' own

abilities as a key component in successful learning and academic growth. Therefore, the principal components of the MWG not only provide a context for students to master the FEDCs of shared attention, engagement, and purposeful collaboration, but also offer opportunities to experience feelings of mastery and pride, i.e., personal influence and self-worth, that prove necessary for functional learning (Ferkany, 2008).

The benefits described below are general in nature in that they don't point to a particular individual or group session. However, they reflect the relatively consistent responses and experiences of the students who partook in 8 to 10 weekly sessions of the group.

### Developmental Implications of Storytelling

For centuries, storytelling has been woven into the fabric of childhood: to entertain and engage, to teach cultural values, and to organize a social experience (Boyd, 2009). More recently, researchers have investigated the benefits of storytelling for education and developmental purposes, including its effect on language acquisition, comprehension, and cognitive faculties (Farrell & Nessel, 1982). This research and exploration also extends to the special education world, which shows that children with developmental differences also respond positively in the form of increased engagement in the classroom (Courtade, Lingo, & Whitney, 2013) and literacy (Craig, Hull, & Haggart, 2001).

The story can be understood as a metaphorical container: It organizes the entire experience of gathering a group of students around shared content. Telling a story calls upon the individuals in the group to pay attention; the story gives them a reason to shift their focus from the internal to the externally shared world. Dr. Gil Tippy, clinical director of Rebecca School, often speaks of the need for an “invitation,” particularly with a special needs population. Educators and treatment professionals working in this field need to invite and summon the interests of students so that vulnerable learners can participate in a shared world of experience (G. Tippy, personal communication, March 20, 2016). The story's opening phrase, “It was a beautiful day, when Siggy, an elder of his time, began a ride in his hot air balloon...” is a beckoning that invites a child's attention and interest towards the group experience.

The content of the story and the developmentally appropriate narration that was constructed also works to engage the students of the group. The themes inherent in *The Three Golden Keys* speak to the interests of a wide range of students, including the peek-a-boo phenomenon (i.e., important objects going missing and needing to be found), as well as themes of “home” and “family.” These concepts not only capture the student's attention but also work to inspire motivation and commitment to the experience; the students genuinely care about what is going to happen because the content resonates with their interests. This genuine interest is often seen in shared smiles and intent focus as the content of the drama is revealed. Despite deficits in spontaneous and pragmatic language (Tager-Flusberg, Paul, & Lord, 2005), children in the group often offer spontaneous comments at crucial moments in the story. These feelings and expressions of investment and dedication are crucial in providing a foundation for active participation and personal identification (Greenspan & Wieder, 2006).

The recurring nature of the MWG group (once-a-week sessions), as well as the repetition built into the experience itself (e.g., repetitive lyrics), also serves to support moments of robust shared attention and engagement. Children, and especially those with learning differences, benefit from repetition in a variety of domains (Schwab & Lew-Williams, 2016). Because students repeat the experience week after week, they are better able to anticipate the content of the story, which offers a greater incentive to attend. Their growing familiarity of the story's content helps to develop a relationship with the story itself. Students learn which parts resonate with them (i.e., characters, themes, pivotal moments), which further inspires commitment to the group's activity. Personal identification with the story is observed in students responding playfully to emotionally significant moments and expressing feelings of excitement and/or sadness at the beginning and end of the story, respectively.

### **Developmental Implications of Role Adaptation**

Many have documented the benefits of role adaptation for students with special needs related to areas of social skills (Chasen, 2011), cognition (Corbett et al., 2014), and emotional growth (Leigh, Gersch, Dix, & Haythorne, 2012). Berkowitz (2011) writes: "By acting out stories, children attend not only to how characters and creatures might look but also to how they move and sound. When they embody a character, they consider its unique qualities and traits and develop a vocabulary of gestures and words to make it real" (p. 37).

This is an important consideration for individuals with developmental differences, who often struggle to participate meaningfully in a group games (Orsmond, Krauss, & Seltzer, 2004). Embodiment of characters creates an earnest expectation of participation (i.e., purposeful collaboration), which serves to inspire motivation and commitment to the experience (i.e., engagement). Through the use of costumes, props, dialogue, and expressive movement, the students have an opportunity to embody each character in the story. Playing roles serves to give group members a deeper understanding of each character's temperament and motives, which directly influences their investment in the experience and deepens their relationship with the drama. For example, when playing the role of the Little Black Cat, many students are observed to spontaneously crawl on all fours, lick the back of their "paws," and/or make dramatic cat sounds.

The recurring nature of the group supports even further the student's identification with the parts because each week, students are offered the opportunity to play different roles. For example, students who are often unsure about playing the role of Siggie during the first few weeks (perhaps as a result of wariness or confusion around the objective) begin to develop motivation in later weeks. This newfound desire to participate may come from a greater understanding of the objective at hand as they have observed and celebrated their peers playing the principal role in previous weeks.

Adopting roles also serves to support the students in their capacity for purposeful collaboration. For example, moments of dialogue can only move forward when the exchange of discourse between two characters has taken place. The role of Siggie can only continue with his journey in pursuit of the keys with support from the Little Black Cat, who through movement, collaborates meaningfully with Siggie by leading him in between the bins in the

center of the circle. Further, Siggy can begin searching only when the observing members of the group have begun chanting, “Search! Siggy, search!” In all of these cases, the ensuing collaboration supports the notion in each individual that communication can be useful and enjoyable.

### Developmental Implications of the Game

Organized games have long been understood as a crucial mechanism in the social development of both typically and atypically developing children (Lancy & Grove, 2011; Betz, Higbee, & Reagon, 2008). Group games create a platform to organize groups of children around a shared, practical endeavor, which necessitates work on foundational developmental skills (Greenspan & Wieder, 2006). Nordoff and Robbins (2004) describe the effect of the game element on targeting this developmental threshold:

The game realized the action of the tale practically; the children could invest their attention and effort in its formed activities. Its meaning became concretely comprehensible to them; they could carry its purpose as a personal impulse or ideal. (p. 89)

In *Siggy the Seeker*, the game draws upon the inherent magnetism of peek-a-boo. Moments of shared attention and engagement are observed from the get-go when the keys are first hidden. As the narrator playfully hides each key, the students focus their attention because they naturally want to know where the keys are going and are genuinely excited by this evolving conundrum! When the very important question is asked: “Who are we going to get to find the three golden keys?!” many students will volunteer to play the principal role because the objective at hand *feels* important to them. The anticipation that builds inside each member at the thought of searching and finding the keys is often felt by multiple students eagerly raising their hands to play the primary role.

The developmental implications of the game are further exposed each time the role of Siggy searches for the key. Because the observing students know the key is in the bin, and they want so badly for it to be found, they organize their attention around Siggy’s efforts. When Siggy succeeds in finding the keys, there is often a moment of shared celebration, which serves to build relationships between group members and an overall feeling of camaraderie. The way Nordoff and Robbins (2004) describe the sweeping action in *Pif-Paf-Poltrie* reflects the experience of Siggy searching for the keys:

The children share deeply in each other’s efforts...When they see a friend become active in the situation that they have all helped to create and in which they share, as they watch him become purposeful and perhaps work hard to overcome a physical or behavioural impairment, they experience a deepening of interpersonal relationships on a positive, generative moral level. They develop a feeling of loyalty towards the task of Pif-Paf, and recognize each other’s efforts to accomplish it. (p. 96).

### Developmental Implications of Music

Finally, the music offers yet another support to pull the students into the experience. Despite a wide range of differences in cognition, students with special needs may possess musical intelligence and sensitivity (Carlson, 2016; Nordoff & Robbins, 2004; Nordoff & Robbins, 2007). For many, with or without disability, music is naturally engaging with an entirely unique set of impressions of experience on the human condition. Because human beings naturally engage in and experience satisfaction and fulfillment from musical participation, the music in the MWG serves to draw attention to the content and action of the story (*shared attention*) and develop interest and attunement in the group members (*engagement*). For example, when Siggy is searching for the golden key in a bin, the *Search Chant*, which is rhythmically recited by the observing members of the group, focuses their efforts to find the key and brings a new level of excitement to the process. Equally, the chanting gives purpose and meaning to the observing group members; it deepens the realization in them that they could and should care about their peer's endeavor. When the key is found and the celebratory song, *Look Who Found the First Golden Key*, is sung, a moment for shared gratification is afforded and heightened through the joint act of singing and dancing. All of the group members engage with each other around shared feelings of satisfaction and enthusiasm.

In fact, each song represents an opportunity for purposeful collaboration as well. Singing in a group requires listening to and coordinating one's musical actions with the voices of others, which may develop cooperation and camaraderie across group members (Anshel & Kipper, 1988). Therefore, at each musical moment, the fulfillment of the group's objective is completely dependent upon the active participation of the group members as a whole. The success of the group is manifested in the collaboration and ensuing peer relationships that develop directly from it.

### Emotional Implications of the MWG

In addition to providing developmentally rich experiences, the programs and professionals that lead them are equally responsible for cultivating a sense of success and value in the students that participate. Acquiring a sense of competence and personal value has implications far beyond personality: "...numerous studies have found that perceived competence, locus of control, and autonomy significantly influence motivational orientation, which in turn, influences academic achievement" (Wiest, Wong, & Kreil, 1998, p. 601). The MWG has a variety of developmentally appropriate elements that are designed to offer students these personal experiences that can positively contribute to scholastic success.

Perhaps the most apparent opportunity to experience feelings of success and personal accomplishment lays in playing the role of Siggy, which is offered to each student in the group over successive weeks. Feelings of success grow directly out of the "work" involved in searching for the golden keys. Because the hiding-and-finding schema innately resonates with the students, each individual can find meaning in the effort to actively realize the objective at hand. Important here is that Siggy's actions take place within the context of a group. Not only do they feel the inherent motivation to find what has gone missing, but also to engage in the



objective while being witnessed by their peers. It is the witnessing of their efforts that leads to deep feelings of success and accomplishment. When searching for a golden key, students in the role of Siggie often celebrate their efforts once the key is found because their actions matter, not only to themselves, but also to the observing members of the group. Their efforts are often applauded through celebratory singing and dancing, which highlights their own feelings of competence and self-worth.

The observing group members have important emotional experiences as well, in large part because they are personally invested in the “work” that the role of Siggie must undertake. Dr. Greenspan (1997) often speaks about the importance of empathy in the developing child—its role in cultivating more abstract thinking and emotional resonance that supports important life skills such as conflict resolution. Others, including Zins, Weissberg, Wang, and Walberg (2004), have noted the strong relationship between social-emotional learning and academic success. The observing group members are able to resonate with the range of feelings involved in Siggie’s “work” (i.e., the flow from determination and motivation to celebration) because they have a relationship with the group endeavor, and perhaps have played the role of Siggie in previous weeks (so they understand what that feels like) or are thinking ahead to upcoming weeks when they might play the part (because they are motivated to do so). This allows students to share the feelings of another and think about those feelings as separate from their own.

The experience that students have of themselves in relation to others is crucial in social-emotional learning. Feelings of relatedness often come naturally to the majority of human beings; so many of us feel connected to particular groups, e.g., familial, peer, religious, political, etc. However, for students with developmental differences, having an experience of community (i.e., truly being a part of something larger than themselves) can be elusive (Bauminger & Kisari, 2000). In the MWG, the possibility of community emerges when group members emotionally resonate with each other around the shared investment of the “work.” A real sense of community is cultivated around the combined mastery of the group endeavor as everyone successfully learns the objective, action, and music as the weeks unfold.

The effect of this burgeoning community feeling extends beyond the confines of the time and place the group meets. Students in different classrooms that are part of the same MWG group often acknowledge each other in the hallways and discuss the roles to be played in upcoming weeks. After the group has run its course, students often continue to excitedly reference it upon seeing fellow group members and facilitators.

### **Final Remarks**

Although music therapists primarily facilitate the MWG, the spirit and format of the group has theoretical and practical considerations for educators and other treatment professionals serving special needs students. Among these is the need for programs to be developmentally appropriate, that is, the content of a group must adhere to where the students are functioning developmentally despite their chronological age. Pre-academic skills related to the FEDCs that are critical in future scholastic success can be effectively addressed through a play-based approach (Bodrova, 2008). Summoning the natural interests of the students,

i.e., what they find inherently motivating, is also of key importance in cultivating meaningful participation and learning (Krapp, 1999). And finally, incorporating active music making into a program may enhance its emotional significance for the students (Nordoff & Robbins, 2004).

While this paper engages in a process of analysis, it paradoxically draws a deep contrast with the effect of synthesis that is forged in the lived experience of the actual group. The elements have been taken apart, so to speak, and explored in great detail: how each element works individually to support the students in crucial social, developmental, and emotional experiences. However, the reality and definitive experience of participating in the group brings these elements together in dynamic harmony to create a sum much greater than each part of the experience. The true spirit of the MWG grows out of the elaborate interaction *between* the story, the roles, the music, and the game. Together, they forge an inimitable experience in artistic expression that has value in its own right, yet impresses upon the growing personhood and individuality of each group participant. The tradition founded by Nordoff and Robbins that began so many decades ago has found meaning and purpose in the evolving treatment and support to enrich the lives of special education students.

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# Promoting Literacy and Language Learning in Special Education through Drama-Based Pedagogies

ALIDA ANDERSON, BRIDGET KIGER LEE AND MEGAN R. BROWN

**ABSTRACT:** *This paper examines the intersection of drama and special education in the area of literacy and language learning to enhance understanding of the relationship between arts in education and special education. The authors present a summary of the research and practice using drama-based pedagogies (DBP) to facilitate literacy and language learning outcomes for elementary and secondary age students with disabilities. The paper's contents include a background rationale and justification for the placement of literacy and language learning at the juncture of arts education and special education research and practice. Key research findings on DBP approaches in relation to literacy and language learning outcomes for students with and without disabilities in a range of special education settings are summarized. Descriptive information on innovative drama programs in special education settings that focus on individualized literacy and language learning outcomes for students with disabilities is provided. The report concludes with research, practice, and policy recommendations for stakeholders aimed at supporting students' literacy and language learning skills through the use of DBP in special education. The intended audience includes teachers, teaching artists, administrators, and researchers.*

Literacy and language learning comprise development of speaking, listening, discussion, and conventional literacy (i.e., reading and writing) skills to access, understand, and share ideas across academic and social arenas. Many students in special education settings share challenges broadly in the area of literacy and language learning; however, their diverse individual learning needs underscore the importance of pedagogies that address a variety of literacy and language learning skills for these students. For example, students with high-incidence learning, attention, and social-emotional/behavioral disabilities (LD, ADHD, and EBD, respectively) may tend to struggle to understand and use conventional literacy forms (e.g., narrative and expository reading and writing) due to underlying linguistic, cognitive, and/or affective challenges (Anderson, 2015a). Students who lack access to meaningful literacy and language learning activities, and who do not participate and progress in such activities, can become chronically disengaged in school. Not surprisingly, students identified with LD, ADHD, and EBD experience disproportionate rates of truancy, dropout, suspension, expulsion, and incarceration (Krezmien & Mulcahy, 2008).

Additionally, those students who have lower-incidence disabilities, such as those with autism spectrum disorder (ASD), may struggle to access, participate in, and progress in authentic and meaningful literacy and language learning activities due to social-cognitive, sensory-motor, and social-emotional and behavioral challenges (Chevallier, Kohls, Troiani, Brodtkin, & Schultz, 2012). Access to and participation in meaningful and authentic literacy learning activities that provide individualized and developmental learning opportunities can

benefit these students. Support in literacy and language learning through DBP is offered as a promising way to reach and teach a broad array of learners with diverse developmental and individualized learning needs in various special education settings, giving them access, promoting their participation, and leading to progress in their language and literacy learning.

### Teaching and Learning Approaches Based on DBP

DBP is a broad category that captures multiple terms: creative drama (McCaslin, 1996), story dramatization (Ward, 1986), process drama (Heathcote & Bolton, 1995), drama-in-education (Bolton, Davis, & Lawrence, 1987), theatre-in-education (Jackson, 2002), theatre of the oppressed (Boal, 1974), applied theatre techniques, theatre games (Spolin, 1986), enactment strategies (Willhelm, 2002), improvisation (Johnstone, 2012), dramatic inquiry (Edmiston, 2014), and role playing (Wagner, 1986). For this review, the following definition guides our work: “DBP uses active and dramatic approaches to engage students in academic, affective, and aesthetic learning through dialogic meaning-making in all areas of the curriculum” (Dawson & Lee, in press).

DBP includes a collection of teaching and learning strategies that teachers can use to facilitate learning in both non-drama content (e.g., geometry, social/emotional skills, etc.) and drama-specific content. Rather than the word “theatre,” we use “drama” to indicate the preferential treatment of the process rather than the product of the art’s outcomes. DBP focuses on how each student learns and engages with material rather than the final product or outcome of that learning. As this is operationalized in classroom settings, DBP includes work that (a) is led by a teacher and/or teaching artist, (b) invites students to embody skills and/or ideas, (c) uses a story or narrative frame to guide and develop work, and (d) depends upon using the imagination of students and teachers (Dawson & Lee, in press). Given this definition, it is important to note the additional focus on “pedagogies” rather than strategies or interventions, which may be more familiar to those working in special education settings. Pedagogies reference the theoretical and operational foundations of teaching and learning (Watkins & Mortimore, 1999). We select the term pedagogies to refer to the larger, holistic approaches to teaching and learning when using drama. We argue that DBP meets specific challenges of providing differentiated instruction in classrooms with students who have varying access and abilities to engage with curriculum. For example, DBP provides opportunities to differentiate instruction in four specific ways that map to differentiation through *process*, *content*, and *product* (Tomlinson, 2001): (a) emotional engagement differentiates the *process* in which students learn content; (b) choice differentiates the *content* and *process* that students learn; (c) physical activities differentiate *process* and *product* in how students demonstrate their learning; and (d) grouping sizes differentiate *process* through the structure of the learning environment (Anderson, 2015a; Dawson & Lee, in press).

Further, we propose that authentic and differentiated learning occurs when strategies are sequenced and incorporated in thoughtful, intentional ways to create rich learning experiences among students, as contrasted with the use of one discrete strategy. Researchers and teachers working in holistic ways with students have shown that student learning outcomes improve in all areas of the curriculum (Lee, Patall, Cawthon & Steingut,



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2015), including individualized literacy outcomes for students with language-based learning disabilities (Anderson, 2012; Anderson & Berry, 2014), and social-communication outcomes for students with ASD (Lerner & Levine, 2007; see review by McMahon, Lerner, & Britton, 2013). Further, the work by Lerner and colleagues (2007; 2012; 2013) focused on social skills has potential for application to educational curriculum.

In Table 1, we outline specific key features of and approaches to DBP that are used to address, support, and improve various literacy-related outcomes in quasi-experimental studies. Because of the dearth and difficulty of conducting quasi-experimental studies focused on the effects of DBP on outcomes specifically for students with disabilities, we first highlight the effects of DBP that have been shown for students in general education classroom settings, some of which may also include students with disabilities. This establishes the possibility and potential for similar results with all students and also highlights the need for additional studies focused on particular populations of students and individualized learning outcomes across various educational settings. Following this overview of the effects of DBP on student learning, we present available evidence from DBP studies with students with disabilities.

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**TABLE 1:**  
Description of DBP Approaches to Literacy

DBP Term	Duration	Key Features	Outcomes/Skills	Grade Level	Citation	<i>d</i> * for literacy achievement
Improvisational drama	8 90-minute sessions	<ul style="list-style-type: none"> <li>• Imaginary framing</li> <li>• Iterative cycle of story building and writing</li> <li>• Theatre games to support idea generation</li> <li>• Given story spine and structure</li> </ul>	Expressive: time on writing task, writing structure, original ideas  Social: self-efficacy to get started on writing	3 <sup>rd</sup> grade	Lee, Enciso & Austin Theatre Alliance, 2017	(.15)**
	6 95-minute sessions	<ul style="list-style-type: none"> <li>• Improvisational exercises focused on rules of improvisation</li> <li>• Give story structure</li> <li>• Oral and written improvisational games</li> </ul>	Expressive: number of words and sentences	9 <sup>th</sup> grade	DeMichele, 2015	(.92)
Drama-based Strategies	40 sessions	<ul style="list-style-type: none"> <li>• Theatre games aligned with state standards and focused on making texts relevant to students</li> <li>• Enacting scenes from novels for interpretation</li> </ul>	Expressive & Receptive: standardized tests  Social: absenteeism	6 <sup>th</sup> -7 <sup>th</sup> grade	Walker, Tabone & Weltsek, 2011	.31
	20 60-minute sessions	<ul style="list-style-type: none"> <li>• Read story</li> <li>• Discuss elements of story</li> <li>• Enact the story</li> </ul>	Receptive: reading comprehension  Expressive: enacting stories	4 <sup>th</sup> grade	Rose, Parks, Androes & McMahon, 2001	(.11)
Creative drama/ Story drama	6 30-minute sessions	<ul style="list-style-type: none"> <li>• Read story</li> <li>• Use pantomime and verbal skills to act out the entire story</li> </ul>	Receptive: reading comprehension	5 <sup>th</sup> grade	Dupont, 1992	(2.03)
	12 40-minute sessions	<ul style="list-style-type: none"> <li>• Introduce topic through story or picture</li> <li>• Use pantomime and verbal skills to improvise and act out a response to the topic</li> </ul>	Expressive: Oral speaking  Social/communication: relevant, appropriate responses to peers	3 <sup>rd</sup> -6 <sup>th</sup> grade	de la Cruz, 1995; de la Cruz, Lian, & Morreau, 1998	(.65)
Role-playing	10-15 sessions	<ul style="list-style-type: none"> <li>• Improvisation games</li> <li>• Enactment of ideas</li> <li>• Reflection on enactment</li> </ul>	Expressive: Developing stories  Social: role-taking ability	5 <sup>th</sup> -6 <sup>th</sup> grade	Wright, 2006	(1.06)

*Note.* \* When adjusted effect estimates were available, these are reported as (). \*\*When more than one effect estimate was available, all effects were averaged for the study.

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As described in the introduction, there are many terms that come under the umbrella of DBP. Although each of the terms can be captured under the larger umbrella of DBP, researchers tend to focus more explicitly on specific key features as outlined in the table. For transparency of the findings, we separated each term and list the specific effect estimates associated with the studies. It may also be important to note that some of these key features are specific to DBP and others may be attributed to both DBP and general education classroom practices. In this way, we both acknowledge effective classroom teaching and learning while also emphasizing the operationalization of drama-based approaches in the classroom.

As shown in Table 1, DBP approaches to literacy included in this review introduce and then invite students to embody and/or enact ideas and stories. Additionally, these studies describe a sustained practice across at least six sessions in the classroom. We have included various outcomes including receptive, expressive, and social/communication. All of the listed studies found a positive effect of DBP on the outcomes. Isolated studies, however, do not allow for broader generalization of the potential effects of DBP. Therefore, next we highlight meta-analytic studies that have shown an overall positive relationship between DBP and literacy outcomes across multiple reports.

In multiple research syntheses and meta-analyses, DBP has been shown to improve verbal skills (Kardash & Wright, 1986; Lee, P atall, Cawthon & Steingut, 2015; Podlozny, 2000), reading comprehension (Hoyt, 1992; Lee et al., 2015), writing (Lee, et al., 2015), and perspective taking (Kardash & Wright, 1986). Given these positive overall effects, data also suggests specific characteristics of DBP that moderate the effects, making them stronger. For example, meta-analysis of 38 reports on the effects of DBP on literacy outcomes show more positive, significant results when (a) more than five lessons are implemented, (b) classroom teachers and teaching artists co-implement the lessons, (c) lessons are used with upper elementary students, and (d) lessons focus exclusively on writing, reading, or speaking rather than a combination of these (Lee, Brown & Enciso, 2016).

This evidence indicates benefits for students when using drama to address literacy outcomes. In light of these findings, why might the relationship between DBP and literacy and language learning skill development exist? The next sections further substantiate this question and provide evidence for the influential relationship between DBP and literacy and language learning skill development in students with disabilities.

### **DBP and Language Development**

At their basis, DBP approaches support communicative function and intention through oral language and through context. Speech acts are ‘performatives’ (Austin, 1978), in that they comprise speakers’ use of body, voice, and mind to convey thoughts and ideas. Oral language is one aspect of the function and intention of a speaker’s interaction with their partner(s). Well-established communication milestones are supported by environmental interaction, and in the absence of linguistic skills (i.e., expressive vocabulary, initiations/responses, etc.), communicative action is heavily reliant on context. The context can be a powerful scaffold for language forms (Anderson, 2015b), as well as for development of cognitive and social-emotional skills (Gabriel, 2012; Lerner & Levine, 2007).

Communicative context embodied through DBP includes pragmatic skills of communicative intention and joint attention through dialogic partnership. Moreover, symbolic interactions and mental representations are employed to express concepts and ideas. Another aspect of DBP that supports literacy and language learning is the development of linguistic forms through contextualized language experiences. For example, in DBP, participants use the immediate, here-and-now environment to convey ideas and express understandings through prop use, gestures, facial expressions, movement, etc. Thus, contextualized language experiences of DBP can be used to scaffold increasingly decontextualized language forms (e.g., oral and written discourse expressing elaborative and causal, temporal, and relational ideas).

As suggested earlier, causal relationships have been reported between DBP strategies and verbal skills (Hetland & Winner, 2000; Lee et al., 2015; Podlozny, 2000). Interventions featuring DBP in particular have been linked to improved reading comprehension, communication skills, and perspective taking (Hoyt, 1992; Lee et al., 2015; Rose et al., 2001).

Research that is focused on the relationship between DBP and outcomes for students identified with various learning challenges offers promise. Students with language-based LD have been reported to experience literacy and language learning gains through process-drama, tableau, and in-role activities based on DBP (Anderson, 2012; Anderson & Berry, 2014; Anderson & Berry, 2015). In tableau, students take on the roles of specific characters that require the use of shared knowledge, contextual clues, and high frequency vocabulary to create a scene (Clyde, 2003). The tableau intervention context has been shown to influence on-task behavior (Anderson & Berry, 2015; Berry, 2015) and oral language (Anderson & Berry, 2016) of elementary-age students with LD and ADHD. Drama-based interventions have been shown to improve social cognition and social communication skills for students with LD (Abedin, 2010; de la Cruz, 1995; de la Cruz, et al., 1998) and for primary-age (Corbett et al., 2011, 2014, 2015) and middle- and secondary-age (Guli, Semrud-Clikeman, Lerner, & Britton, 2013; Leavy, 2009; Schieman & Nichols, 2010) students with ASD (see reviews by Gabriel, Angevin, Rosen, & Lerner, 2016; McMahon et al., 2013).

Thus far, we have focused on the theoretical and broad research findings with typically developing students. The following section summarizes the current DBP research conducted with students with disabilities.

### **DBP, Receptive and Expressive Language Outcomes and Students with Disabilities**

In this section, the selected research studies highlight potential connections between DBP and language learning through dialogic activities that invite students to embody skills and/or ideas, using a story or narrative frame to guide and develop work. Although this work is promising in light of the potential effects of DBP on various outcomes for students with disabilities, we also recognize the limited number of studies specifically addressing this specific group of students.

In the following table, we present research findings on strategies and learning contexts of DBP in relation to literacy and language learning outcomes for students with disabilities

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in a range of special education settings. In identifying these studies, the following search parameters were considered: DBP definition, special education populations, prekindergarten to college age subjects, and language/literacy outcomes. A thorough search of meta-analysis data (Lee et al., 2016), book references (Anderson, 2015a, 2015b), and research databases identified 11 studies with varying research methods including qualitative, quantitative, and mixed-method designs.

Literacy and language learning outcomes of the DBP research with students in special education settings focus primarily on receptive (listening and reading comprehension) and expressive (speaking and writing) language and social communication (e.g., verbal initiations and responses, gestures, eye-contact, proximity, and topic maintenance). In particular, evidence-based DBPs that facilitate literacy and language learning for students in special education settings examine receptive and expressive language outcomes (Anderson, 2012; Anderson & Berry, 2014, 2015, 2016; Bosch & Anderson, 2015; de la Cruz, 1995; de la Cruz et al., 1998; DeMichele, 2015), as well as social-communication outcomes (Anderson & Berry, 2015; Corbett et al., 2011, 2014, 2015; de la Cruz, 1995; de la Cruz et al., 1998; Kempe & Tissot, 2012; Schieman & Nichols, 2010). See Table 3 for specific outcomes.

As evident from the summary of DBP research conducted with students who have disabilities presented in Table 2, studies of literacy and language-learning outcomes for students with disabilities have been conducted in a range of settings, from therapy to self-contained and inclusive classroom settings. These studies focus primarily on students with LD, ADHD, and ASD. The research with students who have LD and ADHD focuses on oral and written expressive/receptive language outcomes; while the research with students who have ASD focuses primarily on social-communication outcomes (e.g., Corbett et al., 2015; Lerner & Mikami, 2012; Kempe & Tissot, 2012). Only two studies provided explicit information on receptive language outcomes (listening, comprehension, understanding) for students with LD and ADHD.

In order to assess the quality of these intervention studies, we categorized them according to key elements found in special education interventions, including (a) identification and connection to specific student needs; (b) specific choices in scope, sequence, intensity, and length; and (c) monitoring throughout intervention period for the purpose of adapting instruction when required (Compton, Miller, Elleman, & Steacy, 2014). The inclusion of these elements is intended to provide students with the targeted instruction that benefits their individual needs. What Works Clearinghouse (WWC) quality indicators, which are used to evaluate the strength of intervention research studies, were applied to DBP interventions in classroom settings (see Horner, Carr, Halle, & McGee, 2005 for an explanation of quality indicators for single-case design and U.S. Department of Education, Office of Special Education Programs [OSEP] (2015) for level of evidence-based practice for non-single-case design studies). Special education interventions are primarily individualized for students within small sample sizes. Table 3 indicates the strength of the research outcomes based on the WWC indicators.

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**TABLE 2:**  
DBP and Special Education Research

Literacy/Language outcomes	DBP features	Disability type	Age/grade	Setting	Duration	Study Design	Citation
Expressive (written language); Social/Communication (on-task behavior)	Tableau; Process drama	LD, ADHD	3 <sup>rd</sup> grade; 8-9 years	Self-Contained ELA Classroom	Two weeks; four lessons	Quantitative; ABAB Design	Anderson & Berry, 2014; 2015
Expressive (oral language)	Tableau; Process drama	LD	4 <sup>th</sup> grade	Inclusive ELA Classroom	30 lessons	Quantitative; ABAB Design	Anderson & Berry, 2016
Expressive (written)	Tableau; Process drama; writing-in-role	LD, DD, EBD	4 <sup>th</sup> grade	Inclusive ELA Classroom	8 weeks; 16 sessions; 1 hour each	Quantitative	Anderson, 2012
Receptive; Expressive (oral, written)	Improvisation; tableau; process drama	LD	5 <sup>th</sup> grade	Inclusive Social Studies Classroom	2 weeks; 5 lessons	Quantitative	Bosch & Anderson, 2015
Social/Communication (social-competence)	Theater games; role-playing; improvisation; acting in play	ASD	8-14 years	Summer Camp; Playground	10 sessions; 4 hours each	Randomized Experimental	Corbett et al., 2015
Receptive; Expressive; Social/Communication	Creative drama; pantomime	LD	6-11 years	Small Group; Therapy Sessions	12 sessions; 40 minutes each	Quasi-experimental	de la Cruz, 1995; de la Cruz, et al. 1998
Expressive (written)	Improvisation	Mixed	9 <sup>th</sup> grade	Summer Program	6 weeks; 9.5 hours total	Quasi-experimental	DeMichele, 2015
Social/Communication (social assertion, emotion reading)	Improvisation	ASD	11-17 years	Summer Program	6 weeks; 5 hours/weekday	Quasi-experimental	Lerner, Mikami, & Levine, 2011
Social/Communication	Tableau; improvisation; masks; puppets; writing-in-role; role-on-the-wall	ASD	19 years	Inclusive Classroom	5 months; 13 sessions; 1 hour 40 minutes each	Qualitative	Kempe & Tissot, 2012

*Note.* LD = Learning Disability; ADHD = Attention Deficit Hyperactivity Disorder; DD = Developmental Disability; ED = Emotional/Behavioral Disorder; ASD = Autism Spectrum Disorder; ELA = English Language Arts, Mixed = Cross-Categorical

*Note.* Writing-in-role allows students to write from the perspective of an individual within the lesson, such as a historical figure or character in a story. Role-on-the-wall is used in DBP to help students process their thoughts about a character on large paper; the character outline is drawn on the paper and students are able to write descriptive characterizations around the outline in order to process all that they know about the character.

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**TABLE 3:** DBP and Special Education Research Categorized by WWC Indicators

OUTCOMES	WWC	N	EFFECT SIZE	STUDY DESIGN	CITATION
<p><b>Social/Communication:</b> Students demonstrated a higher level of on-task behavior when DBP was used in comparison to conventional language arts lessons.</p> <p><b>Expressive:</b> Teacher’s assertive statements increased and regulative statements decreased during DBP.</p>	Moderate	26	N/A	Quantitative; ABAB Design	Anderson & Berry, 2014; 2015
<p><b>Expressive:</b> Students had increased rates of word productivity (words per utterance), specificity (literate language use), and cohesion (temporal and causal) in retelling events using DBP.</p>	Moderate	3	N/A	Quantitative; ABAB Design	Anderson & Berry, 2016
<p><b>Expressive:</b> Students were more productive and specific in written language during DBP lessons than conventional lessons.</p>	Moderate	16	N/A	Quantitative	Anderson, 2012
<p><b>Receptive:</b> Students developed increased connections to subject matter and understood more complex information during DBP lessons.</p> <p><b>Expressive:</b> Students demonstrated increased understanding through oral and written communication during DBP lessons than during conventional social studies lessons.</p>	Low	3	N/A	Quantitative	Bosch & Anderson, 2015
<p><b>Social/Communication:</b> Students increased in their use of communication systems, social competence, group play skills, immediate memory of faces, delayed memory for faces, and theory of mind.</p> <p><b>Expressive:</b> Students improved in oral expressive and language skills, as seen through the Primary or Intermediate Test of Language Development (TOLD-2) after DBP was performed in the classroom.</p> <p><b>Social/Communication:</b> Students showed significant increases in social ability, as measured through the Connell Scale of Social Competence and School Adjustment (WMS) following DBP lessons.</p>	Moderate	36	N/A	Randomized Experimental	Corbett et al., 2015
<p><b>Expressive:</b> Student writing showed increases in word and sentence usage after DBP instruction.</p>	Strong	21	1.60	Quasi- experimental	de la Cruz, 1995; de la Cruz et al., 1998
<p><b>Social/Communication:</b> Students exhibited an increase in emotion detection and the ability to socially assert themselves.</p>	Strong	9	0.53	Quasi- experimental	Lerner, Mikami, & Levine, 2011
<p><b>Social/Communication:</b> Students demonstrated an increase in imagination use and social skills during DBP interactions.</p>	Low	2	N/A	Qualitative	Kempe & Tissot, 2012

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As evidenced in Table 3, of the eleven studies focused on DBP and special education, only four studies qualified as strong (de la Cruz, 1995; de la Cruz et al., 1998; DeMichele, 2015; Lerner et al., 2011) since they provide effect estimates and are quasi-experimental designs. Five studies demonstrated moderate levels of evidence and two provided low levels of evidence, also characterized as anecdotal or emerging evidence. The majority of moderate evidence demonstrates a need for more quantitative research with a strong causal design in order to show the strength of DBP in special education settings. Given these specific studies, even those that report moderate and low levels of evidence, what do the researchers suggest is the relationship between DBP and literacy with students who have disabilities?

**Receptive outcomes.** Bosch and Anderson (2015) conducted a mixed-methods action research case study, which utilized “the improvised actions of students and teachers in imagined, unscripted scenarios” (p. 107) as well as tableau to help students to comprehend the American Civil War unit being studied. Overall, the three students with LD improved in their affective, linguistic and cognitive engagement, as evident through classroom interactions, discourse, and written language (vocabulary, complexity of ideas) over the course of the study. Students’ increased cognitive and linguistic engagement was correlated with positive receptive outcomes (listening and reading comprehension). Teachers reported that students’ writing contained “higher-level reasoning and evidence of cognitive processing” (Bosch & Anderson, 2015, p. 124) in each progressive writing sample throughout the study. Analysis of students’ writing samples across drama and non-drama contexts showed significant increases in students’ use of advanced and content-specific vocabulary covered in the two weeks of the study as compared to baseline writing samples. This anecdotal, emerging evidence is consistent with research documenting the influence of process drama on language-learning skills in students with language-based LD (e.g., Anderson, 2012; Anderson & Berry, 2014, 2015). The convergence of evidence on the facilitative influence of process drama on language-outcomes indicates this DBP approach for populations of students with language-based LD; however, more confirmatory research is necessary.

**Expressive outcomes.** Researchers (Anderson, 2012; Anderson & Berry, 2014, 2015, Anderson & Berry, in press) have investigated both oral and written outcomes through tableau, improvisation, process drama and writing-in-role. The writing samples and student interviews provided the basis for collection of expressive data. In one study (Anderson, 2012), all samples were analyzed for number of total words, number of different words, and number of utterances. These samples were collected during dramatic arts integration lessons in which the language was contextualized within the dramatic activities (i.e., communication was bound within the immediate, here-and-now environment through prop-use, gestures, proximal cues, facial expression, etc., rather than through the linguistic units themselves) and conventional language arts lessons decontextualized (i.e., communication was bound within the text structure and outside of the immediate context). The contextualized samples written during the use of DBP included twice the total number of words, with a higher incidence of word variety. Additional gains were seen in the quality of the contextualized writing versus decontextualized, likely as a result of the connection that the students were given with the text through the DBP. These findings indicate that students with LD produced more specific and precise oral and written language in drama-integrated English language arts activities as compared to conventional language arts activities.



**Social-communication outcomes.** Social-communication outcomes associated with DBP research with students who have disabilities have targeted on-task behavior, social skills, and social competence (e.g., verbal initiations and responses, eye contact, topic maintenance). For example, Kempe and Tissot's (2012) study provided students with ASD opportunities for increased social skills through interactions with an imaginary student. Participants were informed that a new student would be joining their class. Using dialogic talk, the students created and developed a description of this individual and then the subsequent sessions focused on different interactions that the students would have with said student. The results of the study demonstrated that both students observed were able to develop social competence in managing abstract topics and emotions. Reviews of similarly focused DBP interventions have shown strong positive results for social-communication learning outcomes in students with ASD (e.g., Gabriel et al., 2016; Lerner et al., 2007; 2011; 2012).

While these outcomes demonstrate a beneficial relationship between DBP and receptive, expressive, and social-communication outcomes with special needs populations, there is a need for more data to substantiate the results. The nature and diversity of this population makes it difficult to design research with strong levels of evidence due to individual learning differences and responsiveness to treatment. However, with more research done with similar populations, there is a potential that these results could provide evidence for a stronger link between DBP and the learning outcomes for students with disabilities.

### **Innovative DBP Programs and Language Outcomes for Students with Disabilities**

This section identifies innovative programs that feature DBP and literacy and language learning outcomes for students, including those students with disabilities. Based on the emerging level of evidence on DBP and language learning outcomes in students with disabilities, our program and policy research is likewise scant. We feel that it is imperative to provide the state of the programs and policies vis-à-vis students with disabilities in national programs that feature DBP in order to provide a baseline and rationale for strengthening research, policy, and programming to these ends.

Therefore, we have focused on our review of programs from an initial search of ArtsEdSearch and Arts and Education/Model Development and Dissemination (AEMDD) Grant Program databases. ArtsEdSearch is a project of the Arts Education Partnership established in 1995 and supported by the U.S. Department of Education and the National Endowment for the Arts in cooperation with the Education Commission of the States (<http://www.artsedsearch.org/about/about-artsearch>). ArtsEdSearch is a collection of high quality research studies focused on the impact of arts education, including analyses of research implications for educational policy and practice. This database includes individuals with disabilities. The AEMMD program through the U.S. Department of Education supports the enhancement, expansion, documentation, evaluation, and dissemination of innovative, cohesive arts education models that demonstrate effectiveness in integrating and strengthening arts in the core elementary and middle school curricula; strengthening arts instruction in those grades; and improving students' academic performance, including their skills in creating, performing, and responding to the arts. The AEMMD program mission includes a broad focus on students with disabilities through

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mandated inclusion and universal design for learning principles. Grant funding is intended to enable local education agencies and arts organizations to create and develop materials for the replication or adaptation of current approaches for integrating a range of arts disciplines, including drama, into the elementary and middle school curricula (<http://www2.ed.gov/programs/artsedmodel/index.html>). The following delimiters were set for program identification: language-learning and/or literacy outcomes (including social-communication), disabilities, dramatic arts, arts integration, and DBP. (For US Department of Education program description, see <http://www2.ed.gov/programs/artsedmodel/awards.html>).

**AEMDD programs.** Eight relevant AEMDD programs were identified that broadly address students' language and literacy learning needs within a broader student risk profile (i.e., underserved, low-achieving). These programs target students with identified disabilities within inclusive classroom and afterschool settings through a variety of DBP (see Table 4). The literacy outcomes range from listening and speaking to reading and writing. Further, virtually no AEMMD grants in the past decade have been aimed at specific disability populations; however, a single program was found for deaf students to learn literacy skills through visual theatre.

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**TABLE 4:**  
AEMDD Programs that Address DBP and Language Outcomes

Year	AEMDD Program	Description	DBP Features	Language Outcomes
2014	The Arts Connection, Inc.	Integrated language program for English learners	Theater arts	Oral discourse
2014	Cleveland Playhouse: Compassionate Arts Remaking Education	Language support for students identified as underserved (at risk, with persistent low achievement).	Drama integration	Literacy skills
2010	Dramatic Results: Write-On Arts	Improve and expand learning experiences for students in low-income environments.	Theater arts	Key language arts concepts
2010	Global Writes Inc.: A Tale of Two Cities	Theatre performance and technology program	Theater arts integration within core curriculum	Literacy instruction
2010	Theater and Language Arts Integration	Theater-integration designed to improve 2-3 <sup>rd</sup> grade student and school performance on national core curriculum content standards.	Theater arts	English language arts
2010	Arts-Based Learning Leads to Literacy	Theater arts program measuring arts (visual and theater arts) and English language arts achievement in K – 8.	Theater arts	English language arts
2010	Quest: Arts for Everyone: TheatreBridge	TheatreBridge uses visual theatre to enhance the literacy skills and theatre skills of deaf and hard of hearing elementary and middle school students.	Visual theatre	Literacy skills
2001	Freese Elementary arts magnet program in the U.S.-Mexico Borderland	Arts instruction program for English learners from local teaching artists in dance, music, theater/puppetry, and visual art, on a rotating basis.	Theatre/puppetry	Reading, verbal expression with peers and teachers

**Community-based programs.** To further explore innovative DBP programs that facilitate literacy and language-learning outcomes for students with disabilities, we expanded our search to national programs affiliated with arts organizations, agencies, and special education associations (e.g., Learning Disabilities Association, Council for Exceptional Children, American Speech and Hearing Association) to identify programs at the local community level. The majority of local DBP programs for students with specific disabilities

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focus on social-communication outcomes for students with ASD (see Table 5). These programs tend to occur outside of the school day, both after school and during summer months. However, one model of service delivery occurs during the school day in collaboration with professionals who are also involved in the program's design. School-based programs for students with LD are described differently, employing a variety of DBP approaches and targeting more conventional (listening, speaking, reading, and writing) literacy outcomes for students primarily in nonpublic day school settings.

These programs report the use the following DBP key features such as improvisational drama, theatre games, group consensus, pantomime, improvisation, stagecraft, and playwriting with students. Students' language outcomes identified by programs include receptive skills such as listening, observation, self-awareness, perception, planning, and organizing of thoughts and ideas. Program descriptions include expressive outcomes namely in verbal (oral, written) initiations and responses, self-expression, and creative exploration. These community-based DBP programs also highlight students' social-communication outcomes such as topic maintenance, turn-taking, perspective-taking, connecting ideas, proximal cues, gesturing, eye-contact, social engagement, confidence, flexibility, empathy, self-esteem, and collaboration.

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**TABLE 5:**  
Sample of Community-based DBP Programs for Students with Disabilities

Community-Based Program	Age/Grade	Disability	Website information
<b><i>Camp Yes And!</i></b> Teachers learn improvisation techniques and applications for their students with ASD.	13-18 years	ASD	<a href="http://yesand.indiana.edu/home.php">http://yesand.indiana.edu/home.php</a>
<b><i>Creative Accepting Sensory Friendly Theatre</i></b> Educational program dedicated to creating a safe, welcoming, comfortable environment.	7-17 years	ASD	<a href="http://www.stagestheatre.org/education/cast-program/">http://www.stagestheatre.org/education/cast-program/</a>
<b><i>Imagination Stage In-School Residency program.</i></b> Partnerships with schools to design and implement specialized drama experiences for students with disabilities.	K-12	ASD EBD LD ADHD	<a href="http://www.imaginationstage.org/searchclasses/access-and-inclusion">http://www.imaginationstage.org/searchclasses/access-and-inclusion</a>
<b><i>Drama Kings and Queens</i></b> An intensive summer camp and weekly class program designed to expose children to the diverse world of theatre in a nurturing and safe environment.	5-15 years	ASD EBD LD ADHD	<a href="http://speakla.com/programs/drama-kings-and-queens-summer-drama-intensive-program/">http://speakla.com/programs/drama-kings-and-queens-summer-drama-intensive-program/</a>
<b>The Gow School</b> Integration of core language remediation programs integrated with dramatic arts.	7-12	LD ADHD	<a href="http://www.gow.org">http://www.gow.org</a>
<b>The Lab School of Washington</b> Integration of core language remediation programs integrated with dramatic arts.	K-12	LD ADHD	<a href="http://labschool.org">http://labschool.org</a>

**Public school district programs.** Other noteworthy arts integration programs from large school districts (LA, Chicago, NYC) utilize DBP and include students with disabilities (see Table 6). The majority of these K-12 programs, however, do not offer specialized programs for students with disabilities and literacy outcomes, rather, they aim to be inclusive of all students' literacy and language learning needs.

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**TABLE 6:**

Public School Programs that Include DBP within Arts Integration Programs

Public School Programs	Website information	DBP Descriptor	Program Description
<b>Everyday Arts for Special Education (EASE), New York and Los Angeles</b>	<a href="https://www.urbanarts.org/program/ease/">https://www.urbanarts.org/program/ease/</a>	Drama integration	Professional development program designed to improve student achievement in communication, socialization, academic learning and arts proficiency through arts-integration strategies.
<b>Los Angeles Unified School District (LAUSD), The Arts Education and Creative Cultural Network Plan</b>	<a href="http://achieve.lausd.net/Page/6447">http://achieve.lausd.net/Page/6447</a>	Drama integration	A collaborative, sustainable, and accountable plan for results that carefully manages all resources to place more arts education opportunities and creative cultural experiences in reach of all students and their families, both inside and outside of the classroom.
<b>Chicago Arts Partnerships in Education (CAPE)</b>	<a href="http://www.capeweb.org/in-school">http://www.capeweb.org/in-school</a>	Drama integration	90 schools participating in 7 in school programs focused on arts integration, collaboration, documentation, reflection, and professional development.

## Research, Practice, and Policy Recommendations for DBP and Language Outcomes

This section summarizes research, practice, and policy implications from our findings on literacy and language learning through DBP for students in special education settings. We identify key recommendations to forward literacy and language learning research, practice, and policy initiatives through DBP for students with disabilities. We include recommendations to address critical directions for this area of research, as well as for practice and policy initiatives aimed at supporting students with disabilities in literacy and language learning through DBP.

**Research and practice implications.** First, this report highlights for researchers and practitioners the benefit of DBP as a holistic approach to support students' engagement in literacy and language learning, as contrasted with sole emphasis on a single product or outcome. This idea has important implications for both research and practice in drama and language learning for all students, including students with disabilities. From a research perspective, it is important to develop methodologies and lines of inquiry that support the intersection of arts and special education research, because special education research has been largely predicated on the notion of individualizing instruction through discrete strategies to reach individualized outcomes (see Compton et al., 2014, for a discussion). Based on our

report's findings, receptive, expressive, and social-communication outcomes for students with disabilities are better supported by holistic and comprehensive DBP intervention approaches than from isolated strategies (e.g., see Gabriel et al., 2016; Lee et al., 2016; Lerner & Levine, 2007 for discussions).

**Recommendations for research and practice.** Future research in DBP and language-learning outcomes for students with disabilities should ensure that research designs include specific consideration of the consistency and fidelity of implementation of DBP interventions with disability populations. Moreover, and consistent with research on DBP approaches in general education and literacy outcomes, quality implementation indicators include number of DBP lessons (> 5), collaboration between classroom teachers and teaching artists, focus on upper-elementary students, and focus on specific literacy or language-learning outcomes (e.g., writing, reading, listening, or speaking) rather than a combination of outcomes (Lee et al., 2016).

These recommendations for research are aligned with recommendations for DBP practice to include the use of a meaningful and integrated sequence of strategies to address language learning and engagement of students with disabilities. This is in contrast to discrete, isolated activities that target a single outcome. The strongest outcomes for students with disabilities are reported to be those in which a larger, holistic approach has been taken (e.g., Anderson, 2012; Berry, 2015; Lerner & Mikami, 2012; Lerner et al., 2011).

### Policy Implications

Several national reports of large-scale reform initiatives have been implemented in the arts, but the evaluation of the effectiveness of arts integration strategies within these reports for disability populations has not been specifically investigated. In larger policy and practice reports, outcomes for students with disabilities are aggregated with all students'. Furthermore, programming considerations are not specified by participants' characteristics or learning needs. For example, reports from North Carolina, Oklahoma, and Arkansas's networks of A+ schools, the Chicago Arts Partnership in Education (CAPE), Arts Education in Maryland Schools Alliance (AEMS), Arts for Academic Achievement (AAA) in Minneapolis, and Schools, Parents, Educators, Children, Teachers Rediscover the Arts (SPECTRA+) have documented the benefits of arts integration curricula and programs that include drama, music, visual art, and dance for students of all ages (President's Committee on Arts and Humanities, 2011); however, these national program reports fail to provide programming information specific to students with disabilities.

**Policy recommendations.** National programs should include policies and practices that not only include students with disabilities, but collect data that can be analyzed with regard to students with disabilities. To this end, policies could include active recruitment and support for DBP and special education researchers and practitioners in collaborative engagement toward increased high-quality literacy and language learning intervention research studies based on identified best practices, as well as increased literacy and language learning programs through DBP for students with disabilities within a range of educational settings.

### Conclusions

We conclude by highlighting the strength of evidence for DBP and language and literacy outcomes, accompanied by a lack of disaggregated data to allow analysis for students with disabilities, which substantially limits the strength of reported evidence. While observed literacy and language outcomes that we have presented indicate an influential relationship between DBP and receptive, expressive, and social-communication outcomes in students with LD, ADHD, and ASD particularly, among all students, there is a continued need for additional data to substantiate these results further. Therefore, our findings point to the strong recommendation for research to focus on individualized student outcomes (e.g., language, literacy, and social-communication) within DBP intervention programs. We also recognize the nature and diversity of student populations, including students with disabilities in special education settings, which all present challenges to researchers to design and implement studies that yield compelling evidence. However, this is the work to be done. It is clear from our review of the research on DBP and students with disabilities that these promising approaches merit further and more comprehensive investigation for promotion in the educational landscape, not only for learning and engagement in arts domains, but for supporting developmental domains of literacy and language learning in diverse student populations.



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# The Use of Tableau to Increase the On-Task Behavior of Students with Language-Based Learning Disabilities in Inclusive Language Arts Settings

KATHERINE A. BERRY, ALIDA ANDERSON, AND JENNIFER R. FREY

**ABSTRACT:** *This study examined the use of a drama intervention, tableau, to increase the on-task behavior of three students with language-based learning disabilities (LD) in inclusive 4<sup>th</sup>-grade language arts classrooms. Changes in students' on-task behavior within and across business-as-usual and tableau phases were examined in an ABAB withdrawal design. Descriptive data were collected via audio digital recordings of story recalls to assess the students' understanding of character traits and sequence of events. For all three participants, a functional relation was established between tableau and an increase in on-task behavior through a change in level and stability across phases. All three participants scored higher on the oral story recall assessment during the tableau intervention phases as compared to the baseline and withdrawal phases.*

Dramatic arts integration may enhance students' on-task behavior and lead to improved academic outcomes for students with disabilities (Anderson & Berry, in press; Anderson & Berry, 2014; Catterall, 2002; Deasy, 2002; Parsdad & Spiegelman, 2012; Podlozny, 2000); yet the potential value of specific drama interventions, notably tableau, for increasing students' on-task behavior has been scarcely researched or explored. Tableau is defined as a drama intervention in which students make still images with their bodies to represent a scene or to explore a particular moment in a story for deeper analysis (Farmer, 2011). During a tableau scene, students stand in small groups or in a circle and a theme is given. Based on the theme, students create still images in relation to one another to depict a group of characters from a painting or story. The scene then can be brought to life by having the students use gesture and spoken language to reveal more information about the characters (Farmer, 2011). Tableau holds promise for improving the on-task behavior of students, specifically those with language-based learning disabilities (LD). Thus, the purpose of this study was to determine the extent to which the introduction of tableau increased the on-task behavior of students with language-based LD during small group language arts instruction. Specifically, the study employed an ABAB withdrawal design to examine 4<sup>th</sup>-0grade students' on-task behavior during conventional language arts lessons and during lessons with tableau. On-task behavior data were collected using a whole interval time sampling procedure and were reported as the percentage of intervals on task during small group language arts lessons.

## Students with Language-Based Learning Disabilities

As the largest of the 13 disability categories, students with LD account for 41% of all children aged 6-11 qualifying for special education services (Individuals with Disabilities Education Act [IDEA] Part B Child Count, 2010). Included are students with language-based

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LD who experience difficulties acquiring and/or performing skills associated with receptive and expressive language (e.g., reading, writing, organizing thoughts). Researchers have suggested that these students also tend to have lower levels of behavioral engagement (e.g., time spent on work, intensity of concentration, time on task) during instructional time compared to students without LD, which limits their opportunities to learn (e.g., Bridgeland, Dilulio, & Morison, 2006). One feature of behavioral engagement, on-task behavior, is highly predictive of achievement of students with LD (Bouffard & Couture, 2003) and is the focus of this study.

Increasing on-task behavior of students with LD provides an important way to prevent school failure and later dropout. Students with LD who engage in high rates of on-task behavior are more likely to earn higher grades and perform better on standardized tests (Fredricks, Blumenfield, & Paris, 2004). By contrast, students with LD who exhibit frequent off-task behavior are more disruptive in class, susceptible to frequent absenteeism, and less motivated. Continued low levels of on-task behavior of students with LD in inclusive settings may lead to further academic challenges and emotional problems, including poor self-concept, low self-esteem, school failure, and most significantly, school dropout (Vaughn & Fuchs, 2003).

In an effort to increase on-task behavior and consequently enhance learning outcomes for students with LD, researchers primarily have implemented self-monitoring or self-management procedures (e.g., Rafferty & Raimondi, 2009). In these studies, self-monitoring procedures consisted of elementary-aged students with LD in self-contained and inclusive classrooms listening to an audiotape during an observation period, waiting for the sound of a tone or chime, and recording “yes” on a self-monitoring sheet if they identified their behavior as on-task and “no” if they identified their behavior as off-task. Although such strategies were beneficial for increasing on-task behavior, only two studies were conducted in inclusive classrooms (Digangi, Maag, & Rutherford, 1991; Maag, Reid, & Digangi, 1993). Based on the mandate to include students in general education classrooms and the increasing number of students with LD in inclusive classrooms (Cortiella, 2011; IDEA, 2004), a need exists to identify and evaluate additional techniques for increasing on-task behavior of students with LD in inclusive settings.

## The Value of Process Drama

Several researchers have identified process drama as an important strategy for improving academic and behavioral outcomes for students with LD. Schneider, Crumpler, & Rogers (2006) defined process drama as a method of teaching and learning that allows learners to take on the roles of specific characters or actions. Students with LD who participated in process drama activities of tableau, improvisation, pantomime, role-play, story dramatizations, and Reader’s Theater improved their reading skills, oral language and expression skills, written language skills, and demonstrated improved attitudes, increased interest in learning, greater participation, and increased on-task behavior (e.g., Anderson, 2012; Corcoran & Davis, 2005).

**Reading comprehension and fluency.** Fifth graders with LD in a special education resource classroom who participated in a creative drama program using children’s literature showed significant increases on the Metropolitan Reading Achievement Test (MAT6) from pre-

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test to post-test, whereas the two groups of students who did not receive the drama intervention showed no gains (Dupont, 1992). The group receiving the drama program scored significantly higher on 4 out of 6 criterion-referenced tests assessing students' reading comprehension (Dupont, 1992).

Students with LD also improved their comprehension skills after exposure to a Reader's Theater program (Garrett & O'Conner, 2010). The Reader's Theater program was implemented in four different classrooms, and on average students who participated in the program gained .95 points on the rating scale, which was the equivalent of almost one comprehension grade-level. Similarly, Reader's Theater improved the fluency skills of second, third, and fourth graders with LD in self-contained classrooms (Corcoran & Davis, 2005; Hubbard, 2009; Whittaker, 2005). Pre- and post-oral fluency tests from the Houghton Mifflin reading program were administered and scored as the number of words read correctly per minute. At the end of the Reader's Theater programs, students improved their overall fluency by four or more words per minute (Corcoran & Davis, 2005; Hubbard, 2009; Whittaker, 2005).

**Oral language and expression skills.** Additional researchers showed that students exposed to process drama improved their oral language and expression skills. A year-long study of third and fourth graders with LD in a special education resource classroom revealed that students improved their oral language and expression skills as they engaged in lessons incorporating story dramatizations (Wolf, 1998). Analysis of participant observation field notes, audio recordings, and video recordings revealed that using drama allowed students to better relate to the text, express themselves orally, and engage in meaningful discussions related to the stories.

An additional study (Snyder-Greco, 1982) showed that students' involvement in creative drama improved their oral language skills. In an experimental, repeated measures design, second and third graders with LD/SLI (speech and language impairment) in self-contained classrooms were assigned to either the experimental group or the control group. The experimental group participated in a creative drama program that integrated tableau, improvisation, pantomime, and story dramatization activities into the language arts classroom. Pre and post oral language samples from both groups were collected and transcribed, and *t*-tests were conducted to determine the effects of the drama program (Snyder-Greco, 1982). Results comparing the number of total words (NTW) used by students in both groups from pre to post language samples indicated that students who participated in the drama activities showed statistically significant increases ( $p < .05$ ) in their number of total words (NTW) spoken (Snyder-Greco, 1982).

**Written language skills.** In a separate study, fourth graders with LD in an inclusive classroom who were involved in a process drama intervention using tableau and role-play improved their written language skills (Anderson, 2012). Paired sample *t*-tests were used to compare differences among students' written language specificity and productivity across conventional and drama-based writing activities. Written language specificity was calculated as the number of literate language features (i.e., adverbs, conjunctions, elaborated noun phrases, and mental and linguistic verbs) used, and written language productivity was measured through NTW, number of different words (NDW), and total number of utterances (UTT). Significant increases in students' written language specificity and productivity were observed in the drama activities as compared to the more conventional language arts tasks (Anderson, 2012).



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### **Improved attitudes, increased interest in learning, and greater participation.**

Students with LD who participated in process drama activities and interventions in language arts settings also showed improved attitude and interest levels, improved social skills, greater participation, and increased on-task behavior (e.g., Anderson, 2012; Anderson & Berry, 2015; Anderson & Berry, 2014; Corcoran & Davis, 2005). A study of 12 students with LD in a combined 2nd- and 3rd-grade self-contained classroom revealed that students improved their attitudes during exposure to a Reader's Theater program (Corcoran & Davis, 2005). Before and after the Reader's Theater program was introduced, students completed the Elementary Reading Attitudes Survey, which provided estimates of their attitudes toward reading. Survey results indicated that Reader's Theater improved students' confidence, attitudes, and interest in reading (Corcoran & Davis, 2005).

In their investigations of the effects of creative drama on the social and oral language skills of students with LD, ages 6-11, de la Cruz (1995) and de la Cruz et al. (1998) examined students' interest levels in the drama program. The researchers conducted audiotaped interviews with the students who received the drama program, and transcribed and coded students' responses. Results indicated that all of the students enjoyed their involvement in the drama program and felt that the experience was beneficial. The students also reported that they would like to participate in additional drama lessons (de la Cruz, 1995; de la Cruz, Lian & Morreau et al., 1998). Data analysis of coded, structured interviews revealed that students learned to cooperate with their peers by apologizing, staying focused, and taking turns (de la Cruz, 1995; de la Cruz et al., 1998).

Fourth-grade students with LD also showed greater participation when involved in drama activities than in more decontextualized, conventional writing lessons (Anderson, 2012). Collected anecdotal evidence from interviews with the classroom special education teacher, occupational therapist, and speech and language pathologist suggested that students showed increased willingness to participate in written language activities when they were related to the drama lessons (Anderson, 2012).

**Increased on-task behavior.** Students who participated in process drama also demonstrated increased on-task behavior (Anderson & Berry, 2015; Anderson & Berry, 2014; Whittaker, 2005). Third and 4<sup>th</sup>-grade students with LD in a special education resource classroom displayed increased on-task behavior during Reader's Theater lessons than narrative genre readings (Whittaker, 2005). In separate studies, 3rd-grade students with co-morbid LD/ADHD (attention deficit hyperactivity disorder) in self-contained classrooms showed increased percentages of intervals on task during drama lessons that integrated tableau than in the conventional language arts lessons (Anderson & Berry, in press; Anderson & Berry, 2014).

**On-task behavior in inclusive settings.** Notably, only three drama studies to date (Anderson & Berry, 2015; Anderson & Berry, 2014; Whittaker, 2005) have examined the effects of drama strategies on students' on-task behavior. However, the primary foci of all three studies were academic outcomes (i.e., reading fluency, written language productivity, and narrative cohesion); on-task behavior only was considered a secondary descriptive variable. Also, only one empirical study to date (Anderson, 2012) was conducted exclusively in an inclusive language arts classroom. The remainder of the studies investigated students in self-contained classrooms, resource classrooms, or in a combination of inclusive and self-contained settings.

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A deeper investigation of the use of drama to increase students' on-task behavior (as the primary dependent variable) in inclusive settings is warranted. To address this need, the present study examined the use of tableau to increase the on-task behavior of students with language-based LD in inclusive classrooms.

## Method

### Purpose of Study

The purpose of this study was to determine the extent to which the introduction of tableau increased the on-task behavior of three 4<sup>th</sup>-grade students with language-based LD in inclusive language arts classrooms. The study addressed the following major research question: What are the effects of tableau on the on-task behavior of 4<sup>th</sup>-grade students with language-based LD during small group language arts lessons?

### Experimental Design

An ABAB withdrawal design (Sideman, 1960) was employed to evaluate the potential of a functional relation between tableau and an increase in on-task behavior of 4<sup>th</sup>-grade students with language-based LD. The experimental research design consisted of comparing business-as-usual lessons and tableau lessons across four phases.

### Participants

Students were included in this study if they (a) were in the fourth grade; (b) were diagnosed with a language-based LD as described in the students' Individualized Education Plans (IEPs); (c) had specific language and/or literacy goals in their IEPs; (d) had language and literacy service provision in inclusive classroom settings; (e) had an IQ of 85 or above; and (f) exhibited frequent off-task behavior per teacher report and confirmation through observational data collected before the start of the study.

Three students participated in this study. The students were between the ages of 10- and 11-years-old at the beginning of the study and were enrolled in inclusive 4<sup>th</sup>-grade classrooms in two charter schools (Palisades Elementary and Southeastern Elementary). Palisades Elementary and Southeastern Elementary are located in the Mid-Atlantic United States and serve students from pre-kindergarten through eighth grade. Palisades Elementary and Southeastern Elementary were selected as the two school sites based on the presence of the three student participants, diverse student populations, high percentages of students with special needs, inclusive models, and limited foci on the arts in traditional grade-level classrooms, as well as the researcher's professional association with schools' Director of Student Services. In the Palisades classroom of Teacher 1, Ms. Newton, were Kathleen (Student 1) and Dan (Student 2). In Ms. Mills' Southeastern classroom was Kavon (Student 3). All names are pseudonyms.

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Kathleen was a Hispanic female and Dan and Kavon were African American males. All three students had a diagnosis of learning disability (LD). Student participant information is presented in Table 1.

## Setting and Materials

All sessions were conducted in the student participants' inclusive fourth grade language arts classrooms. During each session, the researcher measured students' on-task behavior using a 10-second whole interval time sampling recording procedure. For the interval to be scored as an occurrence of on-task behavior, students had to remain on task throughout the entire interval; 5 seconds was allowed for recording. During a fixed length 20-minute small group language arts session, the total number of intervals per session was 80. At the end of each session, the researcher calculated the number and percentage of intervals during which the student was recorded as being on-task. The researcher used an audio digital recorder to capture participants' oral retellings of the story at the end of every session in each phase.

## Experimental Conditions

**Phase I: Baseline.** Baseline sessions were conducted with all participants before the intervention began. During the baseline phase, the teachers implemented conventional language arts lessons. In Ms. Newton's class, the conventional language arts lessons consisted of the students reading a chapter from a book or reading aloud a selection from a short story. Then students worked in small groups to complete graphic organizers that required them to identify cause-effect relationships, provide character traits with supporting examples from the text, and distinguish between the main idea and supporting details in a story. Ms. Newton pulled small groups of students to work with her on decoding, comprehension skills, and test preparation strategies while the remainder of the groups completed their graphic organizers.

In Ms. Mills' class, students worked independently to complete seatwork during the conventional lessons. Students read a book chapter and selections from social studies stories, completed worksheets of comprehension questions, and wrote summaries of the selected stories. Ms. Mills did not work with small groups; instead, she circulated the room and assisted students with comprehension skills, spelling, and writing organization.

**Teacher training.** After the end of the first phase, each teacher participated in a one-on-one, 3-hour training after school led by the primary researcher to learn how to implement tableau in the classroom. During the training, each teacher learned (a) why tableau serves as a useful teaching intervention; (b) how to create a tableau; and (c) how to integrate tableau into language arts lessons. Additionally, each teacher watched several videos of teachers effectively implementing tableau. The days following each teacher's training, the primary researcher modeled how to integrate tableau into small group language arts lessons with the students in her classroom. Although the intervention followed a specific protocol, the teachers had flexibility in choosing the story as well as which parts of the lesson included tableau. After the teachers completed the tableau training and reached criterion levels of implementation fidelity, the second phase of the study began on the following day.

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**Phase II: Intervention.** During the second phase, the teachers implemented tableau in their classrooms every school day. Once a minimum of five data points was collected and an increase in level, trend, and/or stability of students' on-task behavior was observed from the first to the second phase, tableau was withdrawn, and the teacher returned to conventional instructional strategies (Phase III).

**Intervention procedures.** For this study, the tableau intervention consisted of a specific protocol developed by Sean Layne and the arts integration consulting firm Focus 5. In this protocol, the teachers implemented four sequential activities: the Actor's Toolbox, Concentration Circle, Cooperation Challenge, and Tableau Challenge (Focus 5 Inc., 2013). The Actor's Toolbox is a short movement routine that is paired with concentration music. By completing the short movement routine at the beginning of each tableau lesson, students demonstrated their agreement to control their bodies, voices, and minds, as well as to concentrate and cooperate.

Then students participated in the Concentration Circle, which prepared them to focus for the upcoming Tableau Challenge. In the Concentration Circle, students were required to stand in a circle and maintain concentration with their eyes locked on a focal point while being presented with different distractions (e.g., adult distraction, peer distraction, visual distraction, visual and sound distraction). Next, the students participated in the Cooperation Challenge to develop their cooperation skills before creating their tableau scenes. During the Cooperation Challenge, students were provided with inclusive challenges (i.e., all students can be included in a group) followed by exclusive challenges (i.e., some students were left out of a group). An example of an inclusive challenge was, "By the time I count to three you are in a group of all girls or all boys." An example of an exclusive challenge was, "By the time I count to seven, you are in a group that has an equal number of boys and girls." Students were required to work together to form the required groups presented by each challenge. After students completed at least two Cooperation Challenges, they engaged in the Tableau Challenge. The Tableau Challenge consisted of four parts: think, share, plan, and create. First, students were given a challenge (e.g., create a tableau to illustrate how a character was feeling at the end of the chapter) and asked to think silently and cross their arms once they had an idea for a tableau. Second, students shared their ideas one at a time when they uncrossed their arms. Third, students worked together to plan their tableau scene.

As part of the planning process, students were required to answer the following questions: (1) What should we make? (2) What parts will we need to make that? (3) What part will you play? Last, students created their tableau scene, which required them to remain frozen and to illustrate multiple levels (e.g., standing, kneeling, lying down). One student was selected by the teacher as the narrator to describe the tableau. At the end of the Tableau Challenge, the teacher provided feedback to the students on their tableau scene using a 5-point rubric. Students earned one point for each of the following: planning, the tableau, the narrator, the correct answer (i.e., relevance of the tableau to the presented challenge), and listening skills. Students also completed a self-reflection rubric after each tableau lesson to assess their own performances.

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**Phase III: Withdrawal.** During the third phase, tableau was withdrawn, and teachers returned to implementing conventional small group language arts lessons. Students' on-task behavior during the third phase was visually inspected within the phase and compared to students' on-task behavior during the second (tableau) phase. Once a minimum of five data points was collected and a decrease in level, trend, and/or stability of students' on-task behavior was observed from the second to the third phase, the fourth phase began, and tableau was reintroduced.

**Phase IV: Re-introduction of intervention procedures.** During the fourth phase, the teachers reintroduced tableau into small group language arts lessons. Students' on-task behavior during the fourth phase was visually inspected within the phase and compared to students' on-task behavior during the third phase. Once a minimum of five data points was collected and an increase in level, trend, and/or stability of students' on-task behavior was observed from the third to the fourth phase, data collection ceased.

## Measures

**On-task behavior.** Students' on-task behavior served as the primary dependent variable for this study and was measured using a whole interval time sampling procedure. On-task behavior data were reported as the percentage of intervals (N= 80 intervals per session) of on-task during 20-minute small group language arts lessons.

Students' on-task behavior was operationally defined as: (a) sitting or standing in a designated space; (b) keeping hands and feet to oneself; (c) participating in the class activity; (d) interacting with peers and the teacher; (e) listening to and following directions; and (f) looking at or using materials in an appropriate manner. Examples of on-task behavior included sitting/standing at one's desk, keeping one's feet on the floor and objects in the desk, working in small groups to complete an assigned activity, asking/answering the teacher's questions about a lesson, demonstrating eye contact and raising one's hand, and using a pencil and piece of paper to write an answer. Non-examples of on-task behavior included getting out of one's seat/designated space, fidgeting, playing with pencils/toys, hitting, biting, or throwing objects, delaying the start of an assignment/skipping class, looking around, staring into space, calling out or talking when prohibited, and playing with materials.

**Oral story retellings.** The researcher collected descriptive data to examine students' understanding of narrative story elements during baseline, withdrawal, and tableau phases. Data collection consisted of the researcher using an audio digital recorder to capture participants' free oral retellings of the story in a quiet area directly outside the classroom. The student's response was recorded using an audio digital recorder. If the student did not mention any characters or events in his/her initial response, the primary researcher prompted, "Can you tell me anything you remember about the characters or events in [name of the story]?" If the student stopped talking and made eye contact with the primary researcher, the primary researcher provided a follow-up prompt, "Is there anything else you want to tell me about [name of the story]?" When the student stopped talking and made eye contact again, the audio digital recording concluded. The recording procedure lasted less than 5 minutes.

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A secondary data coder (blind to the phases) scored the oral retellings by (a) listening to the audio digital recording with a printed copy of the story selection and a transcription of the students' oral responses; (b) evaluating students' understanding based on the number and type of narrative story elements included (i.e., character traits and sequence of events); and (c) recording students' scores on the assessment form that was adapted from a Likert-scale benchmark assessment from Garrett and O'Conner (2010). The mean, range, and standard deviations of scores were calculated within each phase for each participant to describe students' oral recall of character traits and sequence of events across baseline, withdrawal, and tableau phases.

**Social validity.** To assess the social validity of the tableau intervention, teachers completed a questionnaire at the end of their tableau training to record their anticipated feelings about implementing tableau. To assess the feasibility of the tableau procedures given available resources, teachers completed a second social validity questionnaire about the use and perceived effectiveness of tableau after the completion of the fourth phase. The questionnaires consisted of a 5-point Likert scale with five questions with possible ratings ranging from Strongly Agree (1) to Strongly Disagree (5). The mean and standard deviation for each teacher and across the two teachers were calculated before tableau was implemented and at the end of the study.

## Interobserver Agreement

Interobserver agreement (IOA) data were collected on scoring of students' on-task behavior and scoring of oral story retellings. IOA was assessed for approximately 33% of sessions across all phases for each participant by having a trained master's-level graduate student independently code these sessions. Interval-by-interval IOA was calculated as the Total Number of Agreements/(Number of Agreements + Number of Disagreements) x 100. Observers maintained an overall IOA of at least 90% on each IOA session. Percentages of IOA across participants ranged from 97.2% to 99.1%. At the end of data collection, two secondary data coders (two different master's level graduate students) were trained on scoring procedures for the audio digital recordings of oral story retellings to collect scorer reliability data. Double scoring was completed for 20% of the oral story retellings to assess reliability of scoring, and an overall agreement of at least 90% was maintained during each fidelity scoring session.

## Procedural Fidelity

Throughout the study, the researcher provided the teachers with ongoing feedback on their procedural fidelity during baseline, withdrawal, and tableau phases of the study. During all phases of the study, the teachers completed a self-monitoring checklist to confirm that they were not using drama strategies during baseline and withdrawal phases and to monitor their implementation and delivery of tableau during tableau phases. Self-monitoring checklists were 100% correct implementation ( $M = 100\%$ ) for Ms. Newton and for Ms. Mills across all baseline, withdrawal, and tableau phases. To assess procedural fidelity, the researcher completed the procedural fidelity checklist for 100% of teacher lessons for all four phases for each participant. Procedural fidelity was 100% for Ms. Newton ( $M = 100\%$ ) across all baseline,

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withdrawal, and tableau phases. Procedural fidelity ranged between 93.3% and 100% ( $M = 98.4\%$ ) for Ms. Mills. During the tableau phases, the researcher also provided additional feedback to the teachers about their implementation of tableau via e-mail using a prescribed format that identified three strengths of the lesson and one area for improvement.

## Results

For all three participants, a functional relation was established through three demonstrations of a change in level in the hypothesized direction and stability of on-task behavior across phases. The percentage of on-task behaviors within and across phases for the three participants is presented in Figure 1.

**Kathleen.** During baseline, Kathleen's on-task behavior ranged from 31% to 60% ( $M = 44\%$ ;  $SD = 12.5\%$ ). During tableau, Kathleen's on-task behavior increased and ranged from 86% to 96% ( $M = 93\%$ ;  $SD = 4\%$ ). When tableau was withdrawn, there was an immediate decrease in level and an increase in variability of the percentage of on-task behavior, ranging from 23% to 55% ( $M = 40.4\%$ ;  $SD = 12.3\%$ ). An immediate and slight increasing trend of on-task behavior was observed in the re-introduction of tableau, with percentages ranging from 93% to 99% ( $M = 95\%$ ;  $SD = 2.5\%$ ).

**Dan.** During baseline, Dan's on-task behavior ranged from 29% to 51% ( $M = 42.8\%$ ;  $SD = 9\%$ ). The percentage of on-task behavior increased with the introduction of tableau. During tableau, Dan's on-task behavior ranged from 81% to 88% ( $M = 84.8\%$ ;  $SD = 2.6\%$ ). When tableau was withdrawn, there was an immediate decrease in level and an increase in variability of the percentage of on-task behavior. Dan's on-task behavior during withdrawal ranged from 18% to 63% ( $M = 38.2\%$ ;  $SD = 19.1\%$ ). Dan's on-task behavior during the re-introduction of tableau increased and ranged from 85% to 96% ( $M = 92.2\%$ ;  $SD = 4.4\%$ ).

**Kavon.** During baseline, Kavon's on-task behavior ranged from 14% to 38% ( $M = 28.4\%$ ;  $SD = 9.3\%$ ). During tableau, Kavon's on-task behavior increased and ranged from 80% to 91% ( $M = 86\%$ ;  $SD = 4.2\%$ ). Kavon's on-task behavior during withdrawal decreased and ranged from 19% to 44% ( $M = 31.7\%$ ;  $SD = 10.1\%$ ). Kavon's on-task behavior during the re-introduction of tableau increased and ranged from 89% to 95% ( $M = 92\%$ ;  $SD = 2.8\%$ ).

## Oral Story Retellings

On average, all participants scored higher on the oral story recall assessment during tableau intervention phases than in baseline and withdrawal phases. Kathleen's average score was 1.6 ( $SD = 0.55$ ; range, 1-2) during baseline, 2.2 ( $SD = 0.45$ ; range, 2-3) during tableau, 1.8 ( $SD = 0.84$ ; range, 1-3) during withdrawal, and 2.6 ( $SD = 0.55$ ; range, 2-3) in the final tableau phase. Dan's average score was 2.6 ( $SD = 0.55$ ; range, 2-3) during baseline, 2.6 ( $SD = 0.55$ ; range, 2-3) during tableau, 1.8 ( $SD = 1.10$ ; range, 1-3) during withdrawal, and 3.2 ( $SD = 0.45$ ; range, 3-4) in the final tableau phase. Kavon's average score was 2 ( $SD = 0$ ; range, 2-2) during baseline, 2.6 ( $SD = 0.89$ ; range, 2-4) during tableau, 1.67 ( $SD = 0.52$ ; range, 1-2) during withdrawal, and 2.8 ( $SD = 0.84$ ; range, 2-4) in the final tableau phase.

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## Social Validity

Results from the pre-intervention social validity questionnaire indicated that both Ms. Newton and Ms. Mills strongly agreed that the tableau intervention would not take more than 15 minutes to implement; they would be able to implement tableau correctly; tableau would not disrupt their classroom routines; students would be highly interested in tableau; and students would increase their on-task behavior. Results from the post-intervention social validity questionnaire showed that Ms. Newton recorded the same responses as in the pre-intervention questionnaire by strongly agreeing with all questions. In her post-intervention questionnaire, Ms. Mills strongly agreed that students were highly interested in tableau and increased their on-task behavior. She agreed that the tableau intervention did not take more than 15 minutes to implement, she was able to implement tableau correctly, and tableau did not disrupt her classroom routines.

## Discussion

Findings showed that all three participants' on-task behavior increased following the introduction of tableau during small group language arts lessons and decreased following the withdrawal of tableau and return to conventional instructional strategies. Notably, a functional relation was established through three demonstrations of change in level and stability in the hypothesized directions and was replicated across three participants. Students' on-task behavior increased and stabilized following the introduction of tableau, and decreased and became more variable following the withdrawal of tableau and return to conventional instructional strategies. In addition, all participants scored higher on the adapted version of Garrett and O'Conner's (2010) benchmark assessment during the tableau intervention phases than in the baseline and withdrawal phases. These findings extend previous research (Anderson & Berry, 2015; Anderson & Berry, 2014) that suggests the value of using drama interventions for increasing the on-task behavior and providing greater learning opportunities for elementary students with LD in inclusive language arts classrooms. Although earlier process drama studies revealed that participation in drama interventions had positive academic and behavioral benefits for students with LD, the current research is the only drama study to date to include on-task behavior as the primary dependent variable and to utilize a single-case design to establish a functional relation between tableau and an increase in students' on-task behavior. Given that tableau increased students' on-task behavior and provided greater learning opportunities for students to enhance their oral recall skills, tableau holds potential to support both the behavioral and academic needs of students with disabilities. Future studies should expand this research by investigating the added value of tableau for improving academic (e.g., understanding of narrative story elements) and behavioral outcomes (e.g., increased on-task behavior) for students with disabilities in inclusive classrooms. The multisensory nature of the tableau intervention, which incorporated elements of body, voice, and mind, suggests that multisensory learning opportunities benefit students with disabilities. Future studies may consider the unique or combined contribution of multi-arts (e.g., drama, dance versus drama) interventions for enhancing the behavioral and academic engagement of students with disabilities. Also, future studies should extend this research to examine the value of tableau across different settings, participants, and materials to determine generalizability of findings. Considering the positive findings of this study, tableau should be considered an important feature of future arts integration research and practice.



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## Limitations

Although this research provided initial evidence supporting the benefit of tableau for increasing the on-task behavior of students with language-based LD during small group language arts instruction, limitations emerged during data collection and should be considered when interpreting the results of the current study. The study was primarily limited because a functional behavioral assessment (FBA) was not completed to determine the function of off-task behavior for the three participating students, and the tableau intervention was not designed to address the function(s) maintaining students' off-task behavior. Conducting an FBA prior to the study would have provided information about whether the components of tableau addressed the function of each participant's off-task behavior. However, because the study's results indicated that a functional relation existed between the introduction of tableau and an increase in students' on-task behavior for all three participants, the data suggests that tableau addressed the function of students' off-task behaviors. Future studies should include FBAs at the outset of the study to identify the function of off-task behavior and to ensure that the tableau intervention is tailored to address the functions maintaining students' off-task behaviors. Researchers also should collect formal data on potential reinforcers of students' on-task behavior, such as student interest levels and teacher praise, to better understand the relationship between antecedents, behaviors, and consequences in the study.

Also, the extent to which the findings showed maintenance effects in natural conditions with the same setting, participants, and materials is unknown. An opportunity to collect maintenance data through follow-up sessions would have provided additional information about the extent to which the teachers continued to implement the tableau intervention, as well as whether students' on-task behavior continued to increase during lessons that integrated tableau.

## Implications for Future Research

Research recommendations are designed to better understand how and in what ways arts integration can support the diverse needs of students with LD. Recommendations include the need for high quality arts integration intervention research and cross-curricular research.

**High quality arts integration intervention research.** The current research is consistent with results from earlier studies (Anderson & Berry, in press; Anderson & Berry, 2014; Whittaker, 2005) that suggest the value of drama interventions for improving the on-task behavior of students with language-based LD. Although results from this study are promising, this research should be replicated to better understand the added benefit of arts integration interventions for teachers and students. One recommendation is for future research to examine the potential of high quality arts integration interventions for improving behavior outcomes and language outcomes for students with LD.

Future research should continue to employ high-quality single-case designs to further examine the potential for drama interventions to improve the behavioral outcomes of students with LD in inclusive classrooms. Future researchers may consider a variety of designs for replication. For example, an initial follow-up study could replicate the current research across

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different settings, participants, and materials to determine generalizability of findings and the specific ways tableau can support students with LD in inclusive classrooms. Researchers also should collect formal data on potential reinforcers of students' on-task behavior to better understand the relationship between antecedents, behaviors, and consequences in the study. An additional follow-up study could explore the potential of a functional relation between tableau and a feature of behavioral engagement other than on-task behavior, such as attention, asking questions, or contributing to class discussions. A multi-element design that examines the specific components of tableau also serves as an important future study for understanding which features of tableau best support the behavior of students with LD. Another potential study may examine the possible functional relation between a drama intervention other than tableau and students' increased on-task behavior. Previous studies (e.g., Anderson, 2012; Corcoran & Davis, 2005) have highlighted the value of improvisation, pantomime, role-play, story dramatization, and Reader's Theater for improving students' behavior. Future research should consider the benefit of these drama interventions.

Although previous research and current study emphasized the benefit of drama for enhancing language outcomes, future studies are needed to determine how and in what ways drama interventions enhances language skills. To best support the language learning needs of students with LD in inclusive classrooms, future research should examine the potential causation between tableau and language outcomes (e.g., story comprehension, oral expression). A possible follow-up study could employ a multiple baseline single-case design to explore the potential of a functional relation between tableau and oral recall of character traits and sequence of events for elementary-aged students with LD. Another potential follow-up study may include a randomized control trial with pre, post, and delayed post-tests (e.g., oral story retelling assessments) to compare the long-term retention of literacy content across matched units that integrate tableau and conventional language arts units for elementary-aged students with LD.

Mixed methods and qualitative studies also are needed to deepen the scope of research and determine the learning characteristics and social behaviors of students with LD during tableau and non-tableau lessons. For example, a future case study may triangulate data from formal observations of tableau lessons, student documents (e.g., grades and assignments), and semi-structured interviews with students and teachers to determine how and why tableau might facilitate improved language outcomes for students with LD.

**Cross-curricular research.** Finally, future research should explore the use of tableau as an ongoing, cross-curricular intervention for promoting desired behaviors, scaffolding more difficult language content for struggling learners, and teaching 21st century skills outlined in the Common Core State Standards (CCSS). A possible follow-up study could explore the potential of a functional relation between students' increased on-task behavior and the integration of tableau activities into science, math, and/or social studies lessons and students' increased on-task behavior. Another study may include a randomized control trial to compare narrative story comprehension across matched conventional and integrated science and social studies units with tableau for elementary-aged students with LD. A third study could employ a randomized control trial to compare 21st century skill learning (e.g., connections between oral and written literacy) for students with LD across matched cross-curricular tableau and conventional units.

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## Implications for Practice

Future practice recommendations are intended to prepare and support teachers in their implementation of arts integration practices. Recommendations include (a) increased focus on arts integration as a curricular framework; (b) ongoing professional development and training opportunities; (c) coaching and mentoring from arts integration experts; and (d) the use of tableau across content areas and with other disability populations.

**Increased focus on arts integration as a curricular framework.** Considering the benefit of arts integration for increasing students' on-task behavior and providing greater learning opportunities, one recommendation reflects the use of arts integration as a curricular framework for increasing students' access to difficult academic content. For example, arts integration can be utilized as a curricular framework through which to teach the CCSS; teaching through the arts addresses the CCSS expectations for interdisciplinary teaching and student acquisition of 21st century skills such as creativity, collaboration, problem solving, and the connection between oral language and academic literacy (Anderson & Loughlin, 2014). Arts integration also could be considered as a curricular framework through which to teach science, technology, engineering, and mathematics (STEM) content. By presenting STEM content through the arts, students are provided an additional lens through which to interpret the STEM elements. Combining arts integration and STEM efforts also might enhance cross-disciplinary opportunities and the acquisition of higher-order thinking skills for students with disabilities. More broadly, arts integration could be viewed as a larger curricular framework that offers access to inclusion by scaffolding challenging academic content and providing students with disabilities access to their grade level curriculum.

**Ongoing professional development and training opportunities.** This study emphasized the importance of arts integration for supporting students with LD who presented with different behaviors and diverse learning profiles. In an effort to best address the needs of these students in inclusive settings, future practice should include ongoing arts integration professional development and training opportunities for general and special education teachers. Professional development and training opportunities are necessary, given that many general and special education teachers (a) have little or no training in inclusive practices; (b) have not acquired the necessary skills to address the diverse challenges of their students with identified disabilities like LD; and (c) currently receive limited current professional development opportunities that provide hands-on training and collaboration. Professional development on arts integration (e.g., tableau) also is timely considering the widespread implementation of the CCSS, which set the expectation for teachers to integrate multiple content areas into a lesson and to ensure mastery of rigorous standards for students who often have not learned more basic skills. Professional development and training sessions should consider using a train-the-trainer (TTT) model, which enables teachers with experience using arts integration strategies to train teachers who lack knowledge in this area. A TTT model could help teachers to collectively determine how tableau and other arts integration interventions can be tailored to different content areas to best support the specific needs of the students in their classrooms. In addition to promoting ongoing instructional collaboration across grade levels and subjects, a TTT model of professional development may foster a cadre of skilled instructors, who can build capacity for the implementation of arts integration practices in their individual schools, in their districts,

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and eventually, in their states. Ongoing professional development and training opportunities provide a feasible way to support the curricular growth and development of general and special education teachers, who are faced with the challenge of meeting the needs of increasing numbers of diverse students with LD in the demanding era of inclusion and the CCSS.

**Coaching and mentoring from arts integration experts.** Evidence from this research suggests that there is a critical need to provide teachers with ongoing support and feedback to ensure implementation fidelity of arts integration practices like tableau. An additional practice recommendation is to provide general and special education teachers with coaching and mentoring from outside arts integration experts. Although coaching and mentoring experiences may prove costly and time consuming, these supports are essential for ensuring that teachers are equipped with the skills necessary to succeed in their inclusive classrooms. As budgetary constraints limit the number of special arts teachers (e.g., art drama, dance, etc.), general and special education teachers are expected to develop creative approaches that expose students to the arts. In addition, because IDEA (2004) supports inclusion as a recommendation for students with disabilities at all grade levels, increasing numbers of diverse students with disabilities are being placed in inclusive classrooms. The strategies and supports that general and special education teachers currently receive are insufficient for ensuring their success in the new instructional climate of inclusion and the CCSS. Coaching and mentoring opportunities with arts integration experts provide valuable ways for teachers to learn and implement new techniques with fidelity, receive ongoing feedback, and enhance their teaching craft. One way that schools can effectively employ arts integration coaches and mentors is by using them to create cross-disciplinary arts integration teams (CDAITs) of teachers, parents, and related service providers. Arts integration experts can spearhead CDAITs using the TTT model to promote shared ownership of arts integration implementation in schools and in their surrounding communities. Embedded in CDAITs will be a need for (a) a continual, reciprocal feedback loop to ensure accountability for and implementation fidelity of arts integration practices; (b) documentation of teacher outcomes based on mentorship; and (c) training refinement driven by teacher outcomes data.

**The use of tableau with other disability populations and across content areas.** The results from this study revealed the value of tableau for improving outcomes for students with LD who had diverse academic and behavioral needs. A final practice recommendation is to explore the use of tableau with other disability populations and across additional content areas. Tableau may be implemented to help students with emotional and behavioral disorders enhance their social skills and practice managing their challenging behaviors. Tableau also could be integrated into lessons for students with autism spectrum disorder to develop social cognition and communication skills. For students with speech and/or language impairment, tableau may serve as an effective intervention for increasing students' understanding of content-related vocabulary. In addition, tableau could be integrated across content areas to promote cross-disciplinary teaching and learning required by the CCSS. In literacy and social studies lessons, tableau could be used to depict a sequence of a historical process (e.g., how a bill becomes a law) or to juxtapose seminal historical periods (e.g., pre-industrial society vs. the industrial revolution). In science and math lessons, tableau could serve as an intervention to scaffold learning of more abstract concepts. For example, students could create tableau scenes to illustrate the differences between a solid, liquid, and gas or to demonstrate

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their understanding of acute and obtuse angles. Teachers may choose to implement tableau using the 4-step protocol outlined in this study (i.e., Actor's Toolbox, Concentration Circle, Cooperation Challenge, Tableau Challenge) or they may decide to use an alternative procedure (e.g., Tableau Challenge only). Ultimately, teachers can benefit from using tableau because they can modify the intervention to best support their content area focus and the specific needs of their students.

## Conclusion

In summary, future research should include high quality arts integration intervention research and cross-curricular research. Practical applications of this study reflect the need for: (a) increased focus on arts integration as a curricular framework; (b) ongoing professional development and training opportunities; (c) coaching and mentoring from arts integration experts; and (d) the use of tableau across content areas and with other disability populations.

This study has created a space for high quality, single-case designs with consideration for the added value of the arts for supporting students with LD. Single-case designs allow for close examinations of individualized students' needs, while upholding methodological rigor and highlighting feasibility and generalizability issues, among the critical considerations for effectively translating research findings into practice. Replication and extension of this work is needed across varied curricular areas, settings, and participants to better understand the benefit of tableau for increasing on-task behavior and improving learning outcomes for students with disabilities. Tableau holds promise as a meaningful arts integration strategy, and should be considered as an important way to elevate the state of arts integration research and pedagogy, expand the vision for special education and the arts, and ensure that students with disabilities are provided with innovative approaches to succeed in inclusive classrooms.

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# The Use of Tableau to Increase the On-Task Behavior of Students with Language-Based Learning Disabilities in Inclusive Language Arts Settings

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**TABLE 1:**  
*Student Participant Information*

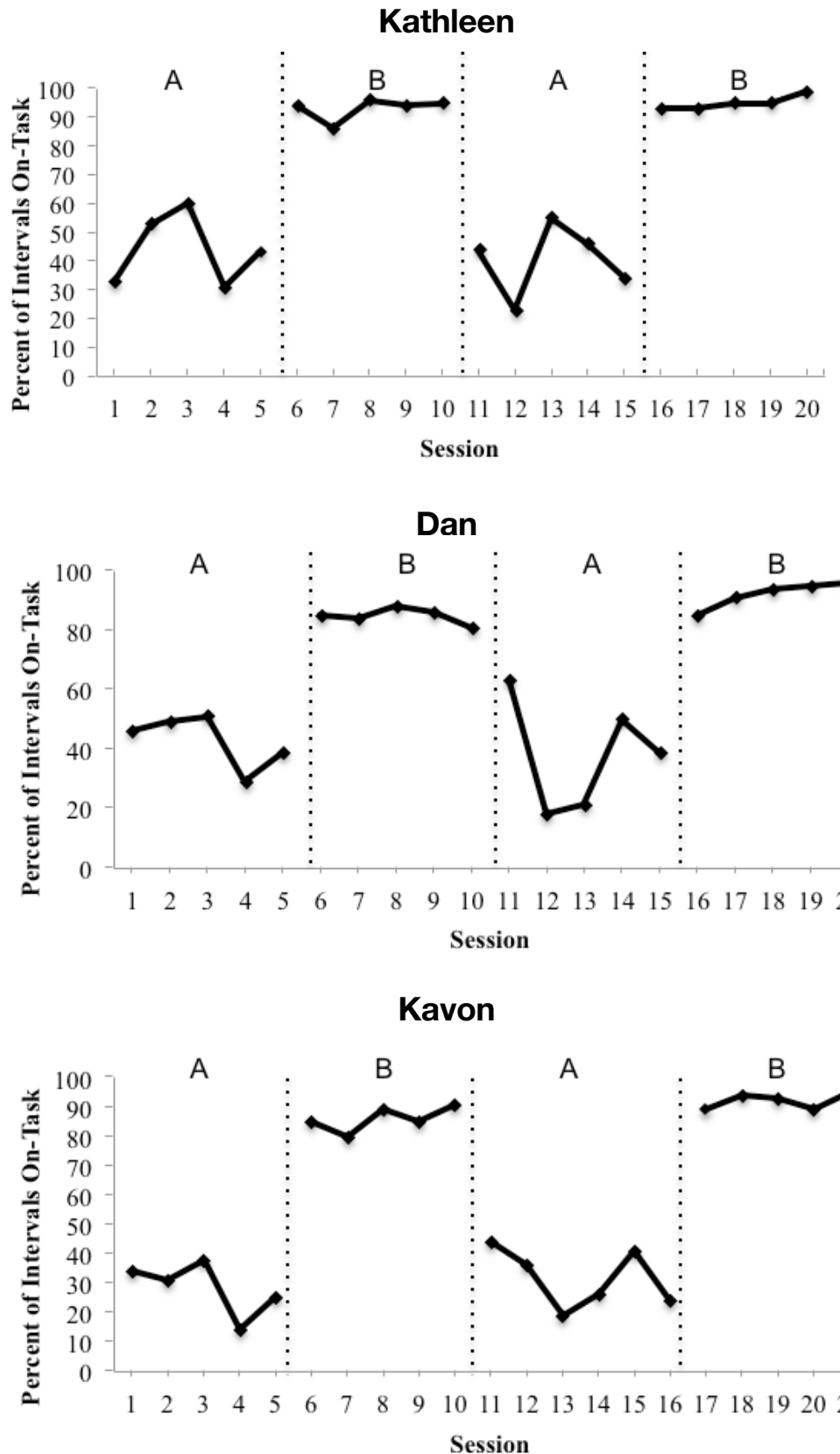
Student	Age (Years, Months)	Teacher/School	Number of Students in Classroom	Gender	Ethnicity	WISC-IV Full Scale IQ Score
Kathleen	11.4	Ms. Newton/ Palisades	26	Female	Hispanic	85
Dan	10.1	Ms. Newton/ Palisades	26	Male	African American	91
Kavon	11.1	Ms. Mills/ Southeastern	26	Male	African American	87

Note. LD = Learning Disability; WISC-IV = Wechsler Intelligence Scale for Children-Fourth Edition.



# The Use of Tableau to Increase the On-Task Behavior of Students with Language-Based Learning Disabilities in Inclusive Language Arts Settings

**FIGURE 1:** Percent of intervals on-task within and across non-tableau (A) and tableau (B) phases for participants.



# ***ArtAbility:***

## **Using Multi-Genre Arts Programming to Support Creative Engagement and Social and Emotional Learning in Middle-School Students with Autism**

EVE MÜLLER, DIANE NUTTING & KATIE KEDDELL

**ABSTRACT:** *This paper describes ArtAbility, a multi-genre arts program for middle-school students with autism. The evaluation of program outcomes used behavioral checklists, interviews with program staff (including teaching artists, administrators, and neurotypical teen mentors), parent surveys, and interviews with participants. Findings indicate that the program positively impacted participants' creative engagement, as well as their social and emotional learning.*

ArtAbility is a collaborative arts education endeavor involving local arts organizations and a special education school in Montgomery County, Maryland. ArtAbility was launched 4 years ago with the aim of offering a multi-genre arts program for middle-school students with autism. Many individuals with autism struggle with significant social cognitive challenges, as well as difficulties engaging in pretend play (Sigman & Capps, 1997). We hypothesized that a multi-genre arts program would not only provide a rare opportunity for students with autism to experiment with a wide range of artistic genres—including drama, music, puppetry, visual arts, and movement—but also to develop social and emotional skills in the context of a safe and highly motivating learning environment.

Each summer, ArtAbility has served approximately 20 middle-school students with autism. The 3-week summer program is taught by a multi-disciplinary team of teaching artists. Instruction is also supported by special educators and behavior specialists and a group of approximately 10 neurotypical teen mentors.

During Year 3 of the ArtAbility program, we evaluated program outcomes via a combination of quantitative and qualitative measures. Our preliminary findings suggested that by the end of the 3-week program, participants demonstrated gains in creative engagement, as well as improved self-advocacy, social interactions/friendships, emotion regulation, flexibility, empathy/support for others, and self-confidence.

The purposes of this paper are to (a) review the literature on autism and arts-based education and provide a justification for why multi-genre arts education makes sense for this population given the social-cognitive challenges often associated with autism; (b) provide a detailed description of ArtAbility; (c) summarize program evaluation findings from Year 3 of the program, and (d) share insights gleaned from administering the program for 3 years.

## LITERATURE REVIEW

### Autism and Brain-Based Differences

Research indicates that individuals with autism can experience the world quite differently from their neurotypical peers. This is because children with autism are born with certain brain-based differences that can impact what is referred to as “social cognition”—the range of behaviors used to process, store, and apply information associated with navigating varied social contexts (Fiske & Taylor, 2013). According to Klin, Jones, Schultz & Volkmar (2003), individuals with autism lack an innate ability to interpret and respond to the ever-changing array of stimuli (e.g., spoken language, tone of voice, body language, and other context cues) that are part of naturally occurring social interactions. They may also appear rigid and inflexible, in large part because they have a hard time making sense of their social environments, determining which details are most relevant and which can be ignored, and making the necessary moment-by-moment behavioral adjustments. Because the ability to read social situations serves as a foundation for the development of other critical social and emotional skills, the social cognitive differences associated with autism can significantly impact joint attention, perspective-taking, initiating and maintaining social interactions, advocating for getting their needs met (e.g., asking for help, asking for a break), and coping with frustration and changes to routines (Sigman & Capps, 1997).

Brain-based differences associated with autism also appear to impact the way in which children with autism play—with most having a hard time engaging in pretend play, especially spontaneous make-believe involving human drama (Sigman & Capps, 1997). The ability to engage in spontaneous imaginative play is important, as it helps children develop language and social skills, communicate emotions, and solve problems.

Because healthy human development depends on the ability to learn through social interaction and play, atypicalities in both social cognitive processing and pretend play mean that without *explicit and targeted support* for developing skills in these domains, important opportunities for social and emotional learning may be lost (Sigman & Capps, 1997; Vermeulen, 2009).

The medical model has traditionally taken a deficit-based approach to autism, focusing on identifying areas of disability, and alleviating symptoms by trying to “fix” what is perceived as being “wrong” (Jaarsma & Welin, 2012; Kapp, Gillespie-Lynch, Sherman, & Hutman, 2013). Although *ArtAbility* program staff and the authors of this paper recognize the very real challenges associated with autism, the program is based on an underlying philosophy of “deficit as difference” (Kapp et al., 2013). In other words, we reject a deficit-based approach, and instead take a strengths-based approach that embraces neurodiversity as a naturally occurring phenomenon, seeking to identify and build on the native abilities and interests of program participants with autism.

# **ArtAbility: Using Multi-Genre Arts Programming to Support Creative Engagement and Social and Emotional Learning in Middle-School Students with Autism**

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## **Autism and Arts Education**

Some research addressing autism and artistic media has focused specifically on art therapy and music therapy—both of which are specific forms of psychotherapy involving the nurturance of self-expression through painting, drawing, or music making/music listening. This is quite different from arts and music education, which focuses on teaching students specific arts techniques, but may result in collateral gains in social and emotional learning.

Several other studies have specifically sought to measure the impact of theater-based arts education programs on young people with autism. For example, two studies by Corbett and colleagues (Corbett et al., 2010; and Corbett et al., 2015; Corbett et al., 2016; Corbett, Blain, Ioannou, & Balsler, 2016) measured the impact of SENSE Theatre, a theatre education program that paired elementary and middle school-aged children with autism with typically developing peer mentors. They used a combination of live and video modeling by peer mentors to help participants with autism learn their parts. SENSE Theatre did not provide explicit instruction in social skills, but focused instead on creating numerous natural opportunities for participants with autism to interact with their peers and peer mentors by engaging in role playing activities and other improvisational theatre games. The program culminated in a full-scale theatre performance. Outcomes based on a variety of standardized tests included improved facial recognition, theory of mind, and social interaction skills.

Another study, by Reading and colleagues (Reading, Reading, Padgett, Reading, & Pryor, 2015), examined the impact of a theatre rehearsal and production process on 17-21 year olds with autism. As with SENSE Theatre, no explicit social instruction was provided, although authors hypothesized that social and emotional learning would take place as a result of increased focus on perspective taking and opportunities for naturally occurring social interaction. A rating tool developed for the purposes of the study found increases in social responsiveness, acknowledgement of the perspectives of others, and participation and cooperation.

Taking a slightly different approach, a study by Guli and colleagues examined outcomes related to the Social Competence Intervention Program (SCIP), a drama-based group intervention for children with autism and other social cognition challenges (Guli, Semrud-Clikeman, Lerner, & Britton, 2013). Unlike the studies described previously, SCIP is primarily a social skills intervention that incorporates drama-based features. Findings indicated that SCIP participants demonstrated significant improvements in positive interactions with peers, as well as decreased solitary play, although standardized behavioral measures failed to reveal any significant differences between participants and controls. Similarly, a study by Lerner, Mikami and Levine (2011) measured the impact of a “socio-dramatic affective-relational intervention” (SDARI) on elementary and middle school students with autism. As part of a 6-week summer program, participants engaged in a performance-based social skills curriculum that included improvisational games and focused on relationship building. Like SCIP, even though SDARI was not technically a theatre program, it utilized some of the same types of role playing activities as the programs described above. Outcomes of the SDARI program included gains in social assertiveness and the ability to detect emotions in other people’s voices, but no significant changes in the ability to read non-verbal cues or in social skills more broadly.

## **ArtAbility: Using Multi-Genre Arts Programming to Support Creative Engagement and Social and Emotional Learning in Middle-School Students with Autism**

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Each of these studies contributes to a small but growing body of research suggesting that theatre-based programming can have a positive impact on the social and emotional learning of young people with autism. As authors point out, drama-based activities provide rich opportunities for participants to consider the perspectives of various characters and practice conveying how characters are thinking and feeling. Examinations of theoretical links indicate that drama could further provide a means of developing skills related to emotion recognition, emotion expression, and use of body language. Because theatre work is ensemble-based, participation encourages development of skills necessary for cooperating with others, including maintaining eye contact, listening to others' points of view, and negotiating differences of opinion (Gabriel, Angevin, Rosen, & Lerner, 2016; Reading et al., 2015; Roy, 2007).

There are a number of limitations to existing research, however. First, studies have only looked at drama-based education for young people with autism. No research to date has examined the impact of multi-genre arts education for this population. Second, the studies described above either (a) focus primarily (or exclusively) on theatre education, with the assumption that improved social and emotional skills will naturally result without need for explicit instruction; or (b) focus primarily on social and emotional learning instruction, using dramatic activities as vehicles for this but failing to explore theatre as an artistic medium in its own right. No programs to date have provided explicit instruction in both arts education and social and emotional learning. Third, each of these studies relied almost entirely on quantitative measures (usually standardized tests), with little or no attempt to describe what social and emotional learning improvements look like within the context of naturally occurring social interactions. Qualitative measures would allow us to further describe the nuances of arts-based social and emotional learning for participants with autism. Finally, minimal to no information was provided on the training of staff to implement arts-based interventions for participants with autism.

### **ArtAbility Goals and Objectives**

In order to address these limitations, and given what is known about autism and the social cognitive challenges associated with autism, the ArtAbility program was designed to do the following:

- provide participants the opportunity to explore a wide range of art forms (including drama, movement, puppetry, music, and visual arts), and implement activities explicitly targeting the development and use of participants' imaginations;
- nurture the development of social cognition by providing explicit instruction designed to increase social awareness, as well as embedding natural opportunities throughout the day for participants to practice social and emotional learning skills;
- foster the creation of an ensemble-based artistic community that works collaboratively to develop a final artistic product; and
- offer specialized instruction by trained personnel designed to meet the unique needs of middle school participants with autism.

# **ArtAbility: Using Multi-Genre Arts Programming to Support Creative Engagement and Social and Emotional Learning in Middle-School Students with Autism**

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In terms of the Year 3 program evaluation study, authors hypothesized that participation in the ArtAbility program would result not only in improved artistic engagement, but also result in improved social and emotional learning. In order to complement existing quantitative studies, we included several qualitative measures enabling us to provide detailed descriptions of the types of changes that stakeholders observed over time.

## **DESCRIPTION OF ARTABILITY**

### **Program Overview**

ArtAbility was originally created through a grant-funded initiative designed to bring together local nonprofit organizations in Montgomery County, Maryland, to develop a partnership that would create original programming opportunities for a group of middle school students who are traditionally underserved (e.g., students with disabilities, lower income students). ArtAbility was designed as a multi-genre arts program specifically intended for middle-school students with autism. As mentioned earlier, the focus of the program is on developing participants' creative engagement, as well as social and emotional skills. Imagination Stage, a performing arts center with over 35 years of experience in providing theatre and theatre education programs to children of all abilities, has consistently served as the lead partner for ArtAbility, working in collaboration with other nonprofit entities including Ivymount School, the Glen Echo Park Partnership, and several other nonprofit organizations.

### **Program Schedule**

The basic building blocks of the ArtAbility daily schedule are consistent throughout the length of the program, although influenced by each day's specific artistic content. The four basic elements of the schedule include:

- Gathering activities designed to provide an opportunity for participants to transition into the program each morning, use preferred activities and themes as entry points, and also create opportunities for welcome, acknowledgement, focus, and engagement within the community as the group begins the day;
- Group/ensemble rehearsal, which consists of ensemble building, group brainstorming, or, in the early days of the program, devising activities as described below, and/or refinement of scenes and sequences in preparation for the sharing of the final artistic product;
- Rotations into specific classes/workshops in each of the five artistic media (drama, movement, puppetry, music, and visual arts), many of which involve developing skills and/or materials to be used in the collaborative final artistic product; and
- Full group closing activity designed to celebrate the diversity and artistic contributions of each participant, while further strengthening the sense of community.

## **ArtAbility: Using Multi-Genre Arts Programming to Support Creative Engagement and Social and Emotional Learning in Middle-School Students with Autism**

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In addition to these components of the daily schedule, other activities are built into the program to further nurture a sense of community and provide participants the opportunity to develop socialization and communication skills and build meaningful connections that will ideally serve as foundations for friendships. These activities include free play and structured break activities, group recess and lunch, and special events (e.g., performances, rides on the historic Glen Echo Park carousel).

### **Staffing Support**

Staffing within ArtAbility is designed to allow content specialists to deliver high quality arts instruction within a safe and supportive environment and provide a wide range of strategies to support individual content mastery, meaningful social engagement, and membership within the artistic community.

In addition to the administrative project staff from each partner organization (usually two to four people, depending on organizational size and project role), logistics support is provided by an onsite program manager and assistant program manager who coordinate and communicate with participants, staff, and families on a daily basis. Four teaching artists (TAs)—many of whom have previous experience with students with autism—make up the core teaching team and focus on individual art forms (i.e., drama, movement, music, puppetry/visual arts), and the collaborative ensemble-based artistic product. One TA also serves as the “lead,” ensuring consistency of curriculum content, as well as identifying needed participant support strategies and materials. A behavior support team provided by the Ivymount School consists of two full-time, on-site classroom assistants who are expert in supporting students with autism, as well as a Board Certified Behavior Analyst (BCBA) who oversees the classroom assistants and the behavior support infrastructures of the program and provides ongoing phone/email consultation when not on site.

Some of the most important staff members within the program are our teen mentors. These high school students are chosen through a rigorous application and interview process each year and receive specialized training to aid them in providing individualized participant supports and fostering an inclusive artistic community where every participant is able to experience meaningful engagement and belonging. The teen mentors have a very special connection to the participants. Being closer in age to the participants than other staff, they are immediately looked up to as role models, and in fact several participants have expressed interest in becoming teen mentors within the program in the future. Teen mentors are either assigned to work 1:1 with an individual participant throughout the program or serve as “floaters” supporting the general participant community. Teen mentors are supervised and supported by the lead TA and onsite program manager, who oversee logistics and individual support assignments but also work with teen mentors to help them process and learn from daily experiences within the program.

### **Participant Profile and Preparation**

Perhaps one of the most unique aspects of ArtAbility is that the program is not designed to cater to one “type” of autism or specific level of functioning. Often programs

## **ArtAbility: Using Multi-Genre Arts Programming to Support Creative Engagement and Social and Emotional Learning in Middle-School Students with Autism**

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for individuals with autism are designed to serve one particular group whose members present similar social behaviors, communication styles, or cognitive development. ArtAbility welcomes any Montgomery County, middle-school student with autism to the program. This allows participants to try on social roles that are not typically available in their regular school settings. For example, participants who may be able to “keep up” in a traditional classroom environment but not necessarily serve as social or academic leaders are given the opportunity to serve as peer models and leaders within the ArtAbility community. Likewise, participants who experience significant challenges related to communication and/or behavior, and are more likely to be placed in self-contained classrooms, are given the opportunity to be exposed to a wide range of positive behaviors and participate in a rich artistic environment that celebrates who they are, and incorporates their contributions into the artistic process and final collaborative product. While this diversity can understandably present challenges for the artistic team, we have found that the benefits of a more inclusive approach outweigh the more difficult aspects of this structure, resulting in deeper levels of respect, understanding, and empathy among the participants themselves.

ArtAbility participants receive a host of pre-program preparation materials to ready them for the ArtAbility experience. They are provided with a “Social Story” with photos and text outlining the program location, elements, expectations and goals. Social Stories were originally developed by Carol Gray (2000). They are brief, customized essays that describe a specific situation (e.g., attending ArtAbility, going to a restaurant) in terms of what to expect and how to behave in a socially appropriate manner. Social Stories are often accompanied by images illustrating expected behaviors. Participants also receive a staff “facebook” that includes pictures of the entire onsite staff as well as a few short fun facts that highlight interests and personalities and a daily schedule that provides a breakdown of activities and rotations for each day. All of these measures are designed to alleviate anxieties—particularly important in a program of such short length—and provide a level of comfort that allows for more concentrated focus by participants on the exploration of art forms and the creative process.

### **The Artistic Process**

ArtAbility is designed to be a participant-centered, collaborative artistic process that culminates in the creation of an entirely original performance art piece. Multiple entry points to the artistic process allow all participants an opportunity to contribute to the final artistic product and outcomes. Over the years, the TAs have used a variety of different methods to create a system of “devising by consensus,” allowing for a flow of original ideas that serve as the backbone of the participant-created work. For example, on a given day TAs might either use participants’ individual affinities, favorite objects, or preferred topics as inspiration for creating small stories that can then be combined into a larger expanded plot. Another devising approach encourages participants to create work around a chosen theme (e.g., “the best day ever”) using music, visual art, movement, or writing. Creations are shared by participants and then woven together into a finalized performance piece. Still another devising method uses a story template written out in a “mad lib” style with specifics of plot, characters, relationships, location, conflict, and resolution left blank. Participants then work together in small groups to fill in information and create a cohesive story. Once the stories are shared, participants



## **ArtAbility: Using Multi-Genre Arts Programming to Support Creative Engagement and Social and Emotional Learning in Middle-School Students with Autism**

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work together to find ways to connect and combine the stories, which often requires making choices and compromising with their fellow artists. It should be noted that these devising techniques were not used simultaneously but were often chosen and adapted to align with the needs of participants as the TAs became more familiar with their individual learning styles. All of these approaches allow for extremely diverse and unique contributions by each participant while maintaining artistic structures that provide some parameters to support good story development. Throughout each of these devising approaches, TAs challenge participants to reach artistic compromise through active listening, patience, flexibility, and creativity—skills that are challenging for any young artist to master, but particularly so for young artists with autism.

Adapting each activity to provide multiple entry points and a variety of frames for both individual and group success is an ongoing process within ArtAbility. The teaching staff thinks about each activity, focuses on the “essence” of the desired outcomes, and then creates a wide range of adaptations that allow everyone to participate—even if it means not everyone is doing the same thing or engaging in the same way (for example, in a game that requires a verbal response to indicate acknowledgement, participants might be given the option to drop a bean bag as a means of acknowledging). Visual supports are used consistently in the delivery of content—be they pictures, diagrams, or specific physical gestures or movements to clarify both artistic and social concepts. Another key element of the ArtAbility approach is that regardless of how small the contribution, efforts are made to incorporate as many participant ideas as possible into the creative process.

ArtAbility is somewhat unique in how it approaches the neurodiversity of its participants. Rather than starting with a program curriculum and then creating accommodations for each participant to help them access the planned material, the teaching team works to assess the unique strengths of each participant and then designs a program that not only provides equitable access to the experience, but utilizes these strengths as the building blocks of the artistic process. This approach provides opportunities for a richer, more multi-faceted artistic product. One example is a participant who utilized an iPad for communication and often struggled to control his body. This smart young man originally struggled with how to contribute to the ensemble in a way equal to his peers and how to have his contribution recognized by the audience during the final sharing. In the early days of the program, the staff learned that he shared with his parents that “Typing is not acting.” The teaching team soon recognized that this participant possessed extraordinary writing skills and a highly sophisticated sense of humor. To fully utilize these strengths, the participant was encouraged to take responsibility for writing lines and monologues for both his and other characters. Pushing his creativity even further, he was able to designate specific teen mentors to speak his own lines while he provided very specific feedback regarding accent, inflection, and rhythms for the character. Artistic and dramaturgical decisions were then made to support the structure of having a character represented physically by one person and verbally by another. This specific example shows how the teaching team was able to not only ensure that each member of the ensemble had responsibility for one or more aspects of the final artistic product; but

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also made sure non-traditional communicators would be seen as having equal “power” in the artistic process and the overall dramaturgical structure of the piece when compared to their more verbal peers.

### **Behavior Support**

The neurodiversity of ArtAbility participants requires a detailed, group-based behavior support system coupled with several individualized behavior support systems. One of the most important general provisions is clear expectations for participants regarding the use of space and time. In the large room where most of the program takes place, the teaching team utilizes spike tape, colored poly spots, and specific wall coverings or other pieces of equipment or furniture to create defined, consistent sections within the room with clear expectations for usage (e.g., a music listening station, art tables, and delineated break areas). Forecasting of short and long range schedules is provided through clearly displayed visuals, clear warnings before transitions, and a program timeline displayed on the wall (and traveled by the “Drama Llama” each day) that breaks down the individual steps of the artistic process by week and day, and tracks the progress of the group as it moves toward the final artistic product. These types of support also help participants improve their executive functioning skills (e.g., goal setting and planning behaviors).

Clear expectations for group/ensemble behavior are also outlined on Day 1 and include staying focused, remaining flexible, being a good friend, keeping a safe body and calm voice, and having fun. These expectations for all members of the ensemble are discussed and reviewed often in the early days of ArtAbility, and then again as needed. Expectations are displayed clearly in the program space along with accompanying images. To further support and incentivize the group, the staff recognizes positive behaviors through a system called pom-pom nominations or “pom-noms.” A large clear plastic jar holds brightly colored pom-poms that are given by staff and teen mentors to recognize the actions of one participant or the overall collaborative work of the group in a particular activity. Once there is a clear understanding of what “pom-noms” represent, staff also encourages participants to nominate each other, and in this way, each participant is recognized for his or her agency in contributing to the success of the group by earning a “pom-nom” for the jar. When the jar is completely filled—usually towards the end of the program—the whole group receives a special treat (e.g., a special outing and popsicles).

In addition to clear expectations for group behavior, many participants require individualized supports to reinforce positive behaviors. They work to earn points or tokens throughout the program day and are rewarded with time for engaging in a preferred activity (e.g., reading a favorite book, swinging on the playground, or watching a short video), or a larger incentive at the end of the day that is pre-arranged and supported by the parent/caregiver. Some participants require individualized schedules they can check off or extra timed breaks—often with specific sensory input, such as time in a bean bag chair or utilizing certain manipulatives. Other support systems were individualized to address particular participants’ needs. One such example was a system designed for a young man who struggled to connect with his peers either within structured activities or during free-play and continually defaulted

## **ArtAbility: Using Multi-Genre Arts Programming to Support Creative Engagement and Social and Emotional Learning in Middle-School Students with Autism**

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to interacting with adult staff members. The teaching team coordinated a series of personal “missions” that he needed to complete each day to earn enough points for a preferred activity/reward. These “missions” were designed to align with the curriculum content as it was delivered, and often required direct interaction with peers for a specific amount of time or to gain specific pieces of information—again, in conjunction with the artistic/devising process. This example demonstrates the unique nature of these individualized support systems. In this case, ArtAbility staff recognized that the participant appeared to be less motivated by a point system than by the stories and imaginative play involved in the completion of each staff-devised “mission,” and was thus able to use this motivator to maintain his engagement in the group process.

### **Summary of Program Evaluation**

During Year 3 of the ArtAbility Program, authors conducted a mixed methods program evaluation that included both quantitative and qualitative components. Authors included a variety of credibility measures for qualitative research (Brantlinger, Jimenez, Klingner, Pugach, & Richardson, 2005). First, since no single set of data could tell the complete story of how ArtAbility impacted participants, authors engaged in the triangulation of multiple data sources to determine whether each set of data pointed to the same conclusions regarding program outcomes. Second, in an effort to be transparent, authors felt it was important to engage in researcher “reflexivity”—i.e., self-disclosing any possible biases and assumptions that could affect the analysis of data. Our authorial team included a program evaluator who served as first author and worked for Ivymount School and two ArtAbility program administrators serving as second and third authors, who worked for Imagination Stage. Although the first author was not involved in any aspects of program design or administration, the second and third authors were actively involved in the planning, design, and daily oversight of ArtAbility during Years 1 through 3. In terms of pre-existing biases, all three authors hypothesized that arts education would likely have a positive impact on social and emotional learning, embraced the philosophy of neurodiversity as a natural part of the human genome, and were invested in the program’s outcomes. To avoid overly subjective interpretations of findings, the three authors collaborated on each component of research design, data collection, and analysis. Finally, to ensure social validity of study outcomes, authors conducted a “member check” wherein interview and survey respondents were given the opportunity to review findings, confirm/reject their accuracy, and offer feedback. The interviews and survey are described below.

### **Methods**

**Participants.** Twenty-one middle school-aged students (ages 10-14 years of age) participated in ArtAbility during Year 3 of the program. Based on parent reports, participants were diagnosed with autism, but as mentioned earlier, they represented all points along the autism spectrum in terms of both cognitive functioning and language/communication skills. Of those who were nonverbal, some were still able to communicate at quite high levels, while others’ communication was extremely limited. Regardless of where they fell along the spectrum, all participants struggled with social cognition challenges. Of the 21, 8 focus participants were selected for observation based on the fact that this was their first year in

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the program. Another group of 8 participants with more sophisticated verbal and cognitive skills was chosen to participate in brief, end-of-program interviews. There was some overlap between these two participant groups.

**Data collection.** The following four types of data were collected in order to measure program effectiveness and the impact of the program on participants:

**Participant observations.** Eight program participants were each observed for 1 day at baseline (beginning of the summer program) and again for 1 day at the end of the program. A behavioral checklist was completed by two program staff (one TA and one administrator) for each focus participant in order to track the frequency of social and emotional behaviors such as self-advocacy, interacting with peers, self-calming, transitioning, helping and encouraging others, and demonstrating self-confidence. Staff rated participants' behaviors using a 4-point, Likert-type scale where 0=never, 1=rarely, 2=sometimes, and 3=often. To resolve any differences of opinion between the two staff, authors averaged both sets of scores for each participant.

**Teaching artist and program administrator interviews.** At the end of the program, four TAs and two program administrators participated in 45-60 minute telephone interviews that included questions about changes in participants' performance across the following domains: engagement in the creative process, self-advocacy, social interactions, emotion regulation/self-calming, flexibility, concern for others, and self-confidence.

**Parent surveys.** Fourteen of the 21 parents completed the online survey regarding whether or not they observed improvement in their children's social and emotional skills. Questions included both 4-point Likert-type scales (i.e., where 0=no improvement, 1=minimal improvement, 2=moderate improvement, and 3=significant improvement) and open-ended questions.

**Participant interviews.** Eight of the most communicatively able participants were interviewed by program administrators at the end of the program regarding which aspects of ArtAbility they liked most, whether they felt supported by program staff and peers, and whether the program was a good place to make friends. Three-point Likert-type scales (i.e., where 0=never, 1=sometimes, and 2=always) were made more salient for participants by including green smiling faces, yellow neutral faces, and red frowning faces.

**Data analysis.** In terms of quantitative data, analysis of observational data was conducted using Excel to calculate frequencies of behaviors across participants at baseline and end-of-program and to measure any observed changes over time. Excel was also used to analyze Likert-type responses from TAs/administrators, parents, and participants. In each of these cases, means were calculated across respondents (e.g., mean growth in participants' skills as reported by TAs/administrators and parents), although sample size was deemed too small to calculate statistical significance.

In terms of qualitative data, open-ended interview and survey responses from TAs/administrators, parents, and participants were analyzed using methods described by Miles and Huberman (1994). First, each author independently reviewed survey and interview transcripts,

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and identified and labeled all instances where respondents provided examples of program outcomes. This level of analysis is often referred to as the identification of emergent categories (Bazely, 2009). Second, authors met to review and consolidate findings and to establish a coding tree based on agreed upon categories. The first author then went back and coded all transcripts accordingly, engaging in an iterative process wherein the three authors continued to refine categories and recode transcripts until they agreed they had accurately accounted for all data.

**Social Validation.** In order to establish the social validity of our findings, we conducted a “member check.” A bulleted list of key findings was distributed via email to TAs, administrators and parents. Respondents were asked to confirm and/or disconfirm findings, and to provide feedback on points authors may have overlooked. All confirmed that findings accurately reflected their perceptions of program outcomes.

## Findings

**Participant observations.** Based on baseline and end-of-program checklists completed by program administrators for the eight focus participants, it appeared that on average focus participants demonstrated growth in all nine domains (see Table 1). Areas of most significant growth (i.e., 0.75 points or more out of a possible 3.0 points) included advocating for needed supports (e.g., asking for help, requesting permission to take a break), offering to help peers, and demonstrating self-confidence. Other areas where focus participants demonstrated more modest growth (i.e., between 0.5 and 0.75 points out of a possible 3.0) included interacting with staff, interacting with peers, waiting for a turn, encouraging peers, and engaging in the creative process. The two domains where participants demonstrated only minimal growth (i.e., less than 0.5 points) was transitioning from one activity to another and waiting for their turn, and this was likely attributable to the fact that focus participants’ baseline scores in these domains were already quite high. In terms of composite scores (i.e., average scores across domains), mean participant scores increased by more than 0.5 from baseline to end-of-program.

Table 2 provides information on observed growth (based on composite scores) for each of the eight focus participants. A comparison of composite scores at baseline and end-of-program indicated that scores increased for seven of the eight focus participants (all except FP1 for whom administrators noted very slight regression). The most dramatic growth (i.e., growth of anywhere from 0.75 to 1.25 out of a possible 3.0 points) was observed for the four focus participants who entered the program with the lowest baseline scores (i.e., FP2, FP4, FP6, and FP7).

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**TABLE 1:**  
Checklist Documenting Changes in Participant Behavior Over Time by Domain

<b>Behavior</b>	<b>Baseline</b>	<b>End-of-program</b>	<b>Difference</b>
Advocates for help	1.81	2.56	0.75
Interacts with staff	1.81	2.34	0.53
Interacts with peers	1.59	2.28	0.69
Transitions smoothly	2.28	2.71	0.44
Waits turn	2.34	2.36	0.02
Offers to help peers	0.78	1.63	0.84
Encourages peers	1.28	1.97	0.69
Demonstrates self-esteem	1.53	2.40	0.88
Demonstrates creative engagement	2.09	2.75	0.66
Average overall	1.73	2.36	0.63

**TABLE 2:**  
Checklist Documenting Changes in Participant Behavior Over Time by Participant

<b>Participant</b>	<b>Baseline</b>	<b>End-of-program</b>	<b>Difference</b>
FP1	2.25	2.17	-0.08
FP2	0.78	1.94	1.17
FP3	1.72	2.14	0.42
FP4	1.75	2.58	0.83
FP5	2.58	2.94	0.36
FP6	0.78	1.97	1.19
FP7	1.31	2.17	0.86
FP8	2.64	2.94	0.31
Average across focus participants	1.73	2.36	0.63

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**Parent rating scale data.** Based on a 4-point Likert-type scale where 0=no improvement, and 3=significant improvement, parents reported modest improvements in a number of areas. Areas of greatest growth included creative engagement (2.3 out of a possible 3.0), self-advocacy (2.1 out of a possible 3.0), and social interactions (2.1 out of a possible 3.0). Parents reported less growth in terms of friendship, flexibility and self-confidence; and they reported the least growth for emotion regulation and demonstrating concern for others.

**Staff and parent interviews.** For the purposes of this study, we combined our qualitative analyses of TA/administrator interviews and parent surveys, as responses were similar across both groups. Data strongly supported the notion that participation in ArtAbility resulted in (a) increased creative engagement, and (b) improved social and emotional skills including self-advocacy, social interactions, friendships, emotion regulation, flexibility, showing support for others, and self-confidence.

**Creative engagement.** By the end of the program, staff noted much higher levels of creative engagement and participation. Not only were participants willing to step out of their comfort zones and experiment with less familiar artistic media and techniques (e.g., puppetry as opposed to coloring and drawing), but also to take greater creative risks in terms of sharing ideas and concepts for the final artistic product and/or volunteering for the daily talent show. At the beginning of the program, only a few participants were willing to perform in the talent show, but by the end, participants were so eager to perform that there was often not enough time for everyone to have a turn. Typical comments included, “The talent shows got more and more creative and exciting, and more and more people participated in terms of puppeteering ... some started with zero manipulation experience and ended up creating characters and manipulating them in a really professional way,” and “We’d ask [participants] quite a lot for spontaneous ideas. We asked them to sing about it, and dance it, and embody it. We definitely saw their willingness to engage increase.” Several staff also noted increases over time in participants’ vocal engagement, and willingness to speak more frequently and assertively, and at greater length. As the culminating performance drew near, participants were also more willing to engage in all aspects of the creative process, and participants seemed to be taking more creative initiative (e.g., selecting songs to sing or picking characters’ names). One TA noted, “As we got closer and closer to the performance, students got more excited about creating the set, coming up with lines, and acting on stage.”

**Self-advocacy.** Although a few interviewees noted that it was difficult to distinguish between improved self-advocacy skills and simply becoming more comfortable with ArtAbility routines and program culture, others observed what they felt were significant improvements in participants’ self-advocacy. According to them, not only did participants become more adept at advocating for basic needs and wants (e.g., requesting bathroom breaks, asking for additional art supplies), but several participants also became more comfortable navigating challenging social situations such as opting out of a non-preferred activity, or asking to sit apart from a participant with whom they did not get along. Typical comments included, “[By the end of the program], he let me know how he was feeling ... he would let me know he did not want to do something, which was a big deal for him,” and “Kids who aren’t friends with each other and found behaviors or scripting annoying were able to self-advocate and say, ‘I don’t want to sit by [him]. Can I sit with someone else?’”

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**Social interactions.** Perhaps the most dramatic change respondents noticed over time was participants' increased willingness to initiate social interactions with their peers. At the beginning of the program, many participants were tentative and/or withdrawn, but by the end of the program, they were reaching out to peers in a myriad of ways: playing with puppets together, conversing about favorite video games, eating lunch side by side, high-fiving and hugging each other. Typical comments included, "At the beginning, a lot were sort of shy. We saw a lot of participants engaged in themselves, and not venturing out, but towards the end, we saw a lot of playing with other students or asking about their lives outside the program." Respondents also commented on how surprisingly similar participants' social interactions were to those of neurotypical middle school students. For example, one TA described how lunch period evolved over time, with participants increasingly taking social initiative: "There was definitely more ... students choosing who to sit next to, and instead of just eating lunch, starting up conversations not started up by teen mentors. It was nice to see conversations happen without adult prompting. And it was stuff everyone talks about: after school, games, movies, books .... By the end of lunch, it even started to get a little rowdy, in a good way. A lot of kids were comfortable with each other and themselves." This sense of comfort, ease, and belonging was a recurring theme across respondents.

One of the most interesting findings was that participants' improved social interaction skills seemed to be related to spontaneous joint engagement in the creative arts. Typical comments included, "The biggest thing was we saw kids putting on puppet shows together, independent of us. This seemed like a safe way to initiate interaction," "[Participants] started asking each other to be in the talent show together, instead of doing solos ... and we started hearing them refer to one another as friends," and "One morning I noticed [another participant] got [my daughter] to sing along with him when they were waiting for camp to start." In other words, opportunities for artistic expression seemed to afford access points for connecting socially with peers, and vice versa.

**Making friends.** Respondents agreed that the ArtAbility program was an excellent environment for building friendships. By the end of the program, many participants were asking for each other's phone numbers, setting up play dates, and telling their parents about their new friendships. Typical comments included, "Some folks couldn't wait for their friend to show up, or tell them what happened in class, or congratulate them for doing a good job—all kinds of things," and "There was significant improvement [by the end]—huge high fives, hugs all over the place. It was incredible."

**Emotion regulation.** Respondents agreed that by the end of the program, participants were better able to use self-calming strategies to regulate their emotions. Several noted that performance anxiety was an issue for some participants, but that they were able to work through their anxieties and participate fully in the end-of-program show. Typical comments included, "I noticed improvements in a couple of students in particular in regulating emotions and advocating for breaks when they needed one," and "I definitely saw people employing self-calming strategies and self-regulation. And everyone did so well during the performance for a population that deals so much with anxiety. Everyone was so excited and willing to perform."



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**Flexibility.** Although a few respondents noted that flexibility was not an issue for most participants at any point during the program, the majority reported that participants were more flexible by the end of the program. Participants were better able to handle schedule changes, wait in line for preferred activities or games, and transition from one activity to another. Typical comments included, “We talked a lot about flexibility, and had a hand motion to talk about how flexible we were, so every day we mentioned it .... We talked about how to handle it. For a population that’s so stereotypically rigid, that was tough, and they did really well with it. We talked about part of what happens [in ArtAbility] is that we’re flexible, and I definitely saw an improvement.” Flexibility became such a natural part of the program that some participants took it upon themselves to remind their more rigid peers about the importance of flexibility. For example, “I also saw them helping each other be flexible, encouraging each other, saying, ‘It’s okay, we have to be flexible.’ Little things. It was really sweet.”

**Support for others.** One of the most powerful findings had to do with participants’ growing sense of belonging to a community of artists/peers and their willingness to encourage one another during performances, praise one another’s accomplishments, and comfort and reassure one another when they were experiencing difficulties. Typical comments included, “For the ones where we did see improvement, we saw amazing moments of altruism. We couldn’t get [one participant] on stage for the show, and [two others] were able to get him on stage. They came over and told him it was his turn, and that he’d love it, and walked him to the edge of the stage. I don’t know that he would have gotten on stage without them,” and “I definitely saw them learning to care for each other and pay attention to each other, and think about what other people needed. And they were always looking around to see who needed cheering on or mentioning to someone what they thought of their performance ... verbal pats on the back.” Several respondents noted that this ability to really attend to one another was key to the building of an authentic arts community. In the words of one respondent, “The friendships I saw were beautiful, there was very much a growing concern for others, and a desire to create a safe space to make art and have community. When putting on a show and going through the creative process together, this is absolutely essential to the process.”

**Self-confidence.** Finally, participants appeared to develop greater self-confidence by the end of the program. Some were speaking more confidently. For example, “On Day 1, 2, 3, we were always reminding campers to use a big voice, and then all of a sudden we never had to remind them. They always came out with huge strong voices. It was exciting to see that change.” Others were taking more creative risks, in spite of the possibility of failure. For example: “[One participant] was very hesitant because he was afraid of ‘screwing up,’ but towards the end he was very gung ho about doing everything.” Almost all of the participants were eager to perform in the daily talent show, proud of what they had learned, and eager to demonstrate their newfound skills. In the words of one respondent, “Everyone wanted to do everything later [in the program]—do puppets, sing, show-off their art. Their self-confidence and ‘look what I can create,’ at the end of the [program] was a really, really wonderful time.”

**Participant interview data.** During brief interviews, the eight most communicatively able participants were very positive about the program. In terms of the different artistic media/activities they were exposed to, most reported that they “always” liked everything. Music was the most popular medium (3.0 out of a possible 3.0), followed by drawing and painting (2.9

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out of a possible 3.0), drama (2.9 out of a possible 3.0), movement and dance (2.6 out of a possible 3.0), and making puppets (2.5 out of a possible 3.0). In terms of how supportive they found their teachers and peers, participants were again very positive. They reported that their ArtAbility TAs and mentors almost always told them when they were doing a good job, and most felt that ArtAbility was a good place to make friends.

### **Implications and Practical Considerations**

Findings from our Year 3 program evaluation were very positive, and suggest that participation in ArtAbility appears to have been related to improved creative engagement and social and emotional learning. Although we did not conduct a randomized, controlled experiment and outcomes cannot be conclusively linked to ArtAbility, stakeholders believed the causal connection was clear and evident.

There are a number of possible reasons why participation in a 3-week multi-genre arts education program like ArtAbility could result in improved participant performance. First of all, like each of the other theatre-arts programs described earlier (i.e., Corbett, Gunther et al., 2010; Corbett, Key et al., 2015; Guli, Semrud-Clikeman et al., 2013; Lerner, Mikami & Levine, 2011; Reading et al., 2015), ArtAbility directly addresses the underlying brain-based differences associated with autism. Throughout the day, staff provides explicit instruction designed to support social cognitive processes such as joint attention and perspective taking, and the program's ensemble-based approach creates abundant opportunities for practice applying social and emotional learning during naturally occurring interactions with peers and staff. In a recent literature review, Gabriel and colleagues clearly identified the natural affinity between theatre education programs and the unique social cognitive challenges experienced by individuals with autism (Gabriel et al., 2016).

The ArtAbility program also directly addresses creative expression by providing explicit instruction in various artistic techniques, as well as supporting participants to use their imaginations and generate unique content. As described earlier, TAs employ a variety of activities to nurture participants' creative expression, often in group contexts requiring artistic collaboration and negotiation. Most importantly, all contributions—no matter how small—are valued and celebrated within the ArtAbility program, allowing each participant to experience the satisfaction of having their creative input both included and built upon.

We do not want to rule out the possibility that participants' improved behaviors may also have been linked to acclimatization, however. In other words, as participants became more familiar with program staff, fellow participants, and program routines, this may have resulted in increased flexibility and a greater willingness to initiate interactions. But even if acclimatization was responsible for all or part of the changes observed, it is still remarkable that such diverse participants were able, in a few weeks' time, to experience such high levels of comfort and membership within the ArtAbility community.

The ArtAbility program is unique in a number of key ways. First and foremost, accepting participants across the autism spectrum leads to a highly diverse group of learners, each requiring individualized behavior supports and access points to the curriculum. Whereas a

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typical program allows TAs to prepare content ahead of time, ArtAbility takes a responsive, participant-centered approach wherein content is built and delivered simultaneously in order to accommodate each participant's unique strengths and needs. This requires staff to do a lot of work "on the fly." For example, TAs cannot prepare in advance what participants will need to access the script for the final artistic product, because the script is developed and evolves over the course of the program.

Another way in which ArtAbility differs from similar programs is the use of teen mentors. Based on an evaluation of the mentorship component of the program, we found that a significant number of teen mentors had decided—based on their experience as mentors—to consider a career in special education. Perhaps even more importantly, all teen mentors reported having learned to think about neurodiversity in a very different, more open-minded way (Müller, Nutting, & Keddell, forthcoming).

Finally, ArtAbility offers participants a rare opportunity to develop a sense of agency. Many participants—especially those with more significant cognitive and communication challenges—may be used to having decisions made for them. ArtAbility is designed to empower participants to be their own creative decision makers. Instead of being told what to do, they are encouraged to make choices about how to use various artistic media, share their talents during the daily talent show, and develop characters and plot for the final artistic product. For some participants, ArtAbility is their first opportunity to experience themselves as creative agents. While this may result in a somewhat convoluted final product (e.g., combining crabs being taken hostage under the sea with characters entering bear caves), participants come away feeling empowered, more willing to share their ideas, and more confident connecting with peers. This conclusion is supported by recent research on the development of agency in young people (Brennan, 2013; Kumpulainen, Lipponen, Hilppo, & Mikkola, 2014). Brennan (2013) describes the importance of cultivating young people's sense of agency. She argues that this can best be done by building on young people's personal interests and ensuring that their abilities and skills are appropriate to program goals—both key features of the ArtAbility instruction. Kumpulainen and colleagues (2014) further claim that supportive social contexts that foster a sense of agency (such as that offered by ArtAbility) are crucial to the development of children's social well-being. We recommend that future research into theatre/arts education programs further explore the collaborative experience, and its impact on participants' sense of agency.

We have identified a number of key considerations when developing a program like ArtAbility. First, the program is extremely resource intensive. This means that collaborative partnerships are absolutely essential. Although Imagination Stage has always taken the lead in implementing the program, Glen Echo Park Partnership provides space for the program, as well as logistical support, and the expertise of Ivymount School staff ensures that participants receive the behavioral support they need to experience success. Over the years, additional partner organizations have also brought strengths and assets to the program. While partnerships strengthen ArtAbility, they also create challenges of their own (e.g., scheduling meetings to bring everyone together at the same time). Furthermore, crafting a common vision that is compatible with each partner organization's mission and philosophy requires work. For example, some organizational partners initially took a deficit-based as opposed to

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a strengths-based approach to autism, and it was only through meeting and talking that a shared vocabulary and mission emerged. Future research might explore the nature of this sort of collaborative process, and the ways in which programs like ArtAbility can result in partners' views of disability evolving over time.

Because so many participants require intensive support, ArtAbility is an expensive program to operate and costs more than three times as much as Imagination Stage's typical inclusion programming. When factoring in both paid and unpaid staff (i.e., TAs, administrative staff, behavioral support team, and teen mentors)—most years there have been approximately 20 staff and 20 participants (or a 1:1 ratio). This poses very real funding challenges. As mentioned earlier, ArtAbility was originally paid for in its entirety through a grant, and the program was offered at no cost to participants. Now that the initial grant has come to an end, we have had no choice but to charge tuition for participants to attend. Because many families of children with autism are already burdened with out-of-pocket medical and therapeutic expenses, it is important that we do our best to keep program costs as affordable as possible. One of the ways we have tried to keep costs down is through the generosity of individual donors.

The positive response from stakeholders regarding the relevance and impact of ArtAbility suggests the need for more programs like it. In order to leverage funds for this type of program, and given the high costs of operating ArtAbility, we hope to see more rigorous, controlled studies of similar programs that include both quantitative and qualitative measures. Research of this type will help paint a fuller, more comprehensive picture of how multi-genre arts education programming can support participants with autism to develop their imaginations hand-in-hand with key social cognitive skills.

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Dr. Adamek has extensive professional experience as a music therapist and music educator. She is a specialist in the areas of music in special education, full inclusion music education, and supervision of music therapy students in training. She is involved in interdisciplinary research at The University of Iowa Children's Hospital to help adolescents use music therapy to decrease pain and anxiety after spinal fusion surgery, supported in part by a Clinician/Researcher grant from AMTA.

Dr. Adamek has presented lectures and workshops at music therapy conferences, music education conferences, special education conference and allied health care conferences internationally and across the United States. She has represented the American Music Therapy Association at international meetings in England and Spain and at the United Nations in New York. She was a participant in the first Kennedy Center interdisciplinary arts education forum, *Intersections: Arts and Special Education National Forum*. She recently represented AMTA at a meeting of the National Education Association (NEA) to promote effective inclusion of Specialized Instructional Support Personnel (SIPS) for implementation of the Every Student Succeeds Act (ESSA).

Dr. Adamek is a recipient of the 2015 American Music Therapy Association Lifetime Achievement Award, the 2013 University of Iowa College of Liberal Arts and Sciences Outstanding Outreach and Community Engagement Award, the 2011 American Music Therapy Association Award of Merit, the 2004 University of Iowa College of Liberal Arts and Sciences Collegiate Teaching Award, and the 2004 American Music Therapy Association Service Award.

**Alida Anderson, Ph.D.**, is Associate Professor in the School of Education at American University, with research and practice interests in inclusive and integrated arts approaches to literacy learning. Anderson's background includes experience as a visual artist and teacher-therapist to students with exceptionalities. She has worked for over two decades in preschool and school age educational settings using creative arts approaches with children at-risk for academic failure, including students with a range of exceptionalities in special and general education settings. Her background experience includes work in museum-based early childhood education settings, art-therapy/teaching in a school for students with autism spectrum disorders, diagnostic and clinical practice in communication sciences and disorders, and pre- and in-service teacher training and professional development in language, literacy, and arts integration topics. Anderson has presented to international and national audiences on a variety of literacy-related and arts integration topics. Presentations have been given to the Society for the Scientific Study of Reading, Council for Exceptional Children, American Educational Research Association, British Dyslexia Association, VSA International, and the

National Council for Teachers of Mathematics. She holds a B.A. in Art/Art History from Colgate University, M.A. in Communication Sciences/Disorders from Northwestern University, and Ph.D. in Special Education from University of Maryland, College Park. Anderson's work is featured in *Dyslexia*, *Child Language Teaching and Therapy*, *The Educational Forum*, *Urban Education*, *Journal of Research in Reading*; *Reading and Writing*; *Journal of International Teacher Education*; *Bilingual Research Journal*; *Learning Disabilities: A Multidisciplinary Journal*; and *Preventing School Failure*. She is editor of *Arts Integration and Special Education: An inclusive theory of action for student engagement* (2015, Routledge).

**Katherine A. Berry, Ed.D.**, works as a Project Manager in the Department of Special Education at the University of Texas at Austin. Berry completed her doctoral degree in the Department of Special Education and Disability Studies at The George Washington University. Berry's dissertation research investigated the use of tableau to increase the on-task behavior of students with language-based learning disabilities in inclusive elementary classroom settings. Previously, Berry worked as a special education teacher for grades 4-6 in DC Public and Charter schools. Berry holds a B.A. in Art History (with honors) from the University of Virginia and a M.A. in Special Education, summa cum laude, from Trinity Washington University. Her work has been featured in *Preventing School Failure*, *Learning Disabilities: A Multidisciplinary Journal*, *Journal of Interdisciplinary Studies in Education*, *The American Journal of Obstetrics & Gynecology*, and *The George Washington University Policy Paper Series*. Recent presentations have included papers given at international and national conferences of the American Educational Research Association, Council for Exceptional Children, International Neuropsychology Society, and the National Arts Education Association. Her expertise is in the following areas: students with specific learning disabilities, language acquisition, curriculum development, teacher training, and arts integrated instruction.

**Megan R. Brown, MA.**, is a PhD student at The Ohio State University with research interests in disability studies, drama-based pedagogy, children's literature, visual studies, and literacy education. Currently, she is a graduate student in the Department of Teaching and Learning. She received a B.S in Elementary/Special Education from Messiah College, with a minor in Theatre, and an M.A. in Children's Literature from Hollins University. Being certified in Elementary and Special Education has allowed Brown to work with K-12 students in both regular and special education within the public school system. Currently, she is a graduate teaching/research assistant teaching pre-service teachers and investigating the ways that drama-based pedagogy can be incorporated into the classroom setting. She is also beginning to work with special education teachers to broaden her research of disability studies to the elementary classroom. Brown has presented to the American Educational Research Association, the Literacy Research Association, and the Children's Literature Association.



**Alice-Ann Darrow, Ph.D.**, is Irvin Cooper Professor of Music Education and Music Therapy at Florida State University. Prior to her appointment at FSU, she taught at The University of Kansas for 20 years. Her teaching and research interests are teaching music to special populations, inclusive practices for students with disabilities, particularly those with behavior disorders and deaf/hard-of-hearing, and the role of nonverbal communication in the music classroom. Related to these topics, she has been the recipient of over twenty federal, university, or corporate grants, and published numerous monographs, research articles, and book chapters.

Darrow is editor of the text, *Introduction to Approaches in Music Therapy*, and co-author of *Music in Special Education*, and *Music Therapy with Geriatric Populations: A Handbook for Practicing Music Therapists and Healthcare Professionals*. Darrow has served on all the major journal editorial boards in music education and music therapy. She is past chair of the Commission on Music in Special Education for the International Society for Music Education, and presently serves as Florida Music Education Association chair for diverse learners.

Darrow has been the recipient of the Ella Scoble Opperman Faculty Citation award from the FSU College of Music, FSU's Guardian of the Flame award, national research and clinical practice awards from the American Music Therapy Association, community service awards from the Alzheimer's Project and Independence, Inc., distinguished member in Sigma Alpha Iota; and while at The University of Kansas, the University's Silver Anniversary Teaching Award, an Intrauniversity Professorship in special education and hearing science, and membership in the KU Women's Hall of Fame.

She received her BM, BME, MM, and PhD degrees at The Florida State University, and taught in music programs for students with and without disabilities in Miami, Florida, before going to the University of Kansas.

**Jennifer R. Frey, Ph.D., BCBA-D**, is an Assistant Professor of Special Education and Disability Studies and the coordinator of the Early Childhood Special Education Graduate Program at The George Washington University Graduate School of Education and Human Development. She received her doctorate in Education and Human Development with a major in Early Childhood Special Education and specializations in Educational Psychology and Applied Behavior Analysis from Vanderbilt University and is a nationally Board Certified Behavior Analyst. Dr. Frey also holds a Master of Education in Early Childhood Special Education and a Bachelor of Science, summa cum laude, in Cognitive Studies and Child Development (with honors) from Vanderbilt University. Her research includes young children with disabilities and children considered at risk due to poverty and other environmental factors and focuses on assessing language, social skills, and behavior and training teachers and parents to implement early language and behavior interventions across home and school settings. She has co-authored several refereed book chapters related to social skills acquisition and intervention, and her research has been published in *Journal of Early Intervention*, *Topics in Early Childhood Special Education*, *School Mental Health*, and *Assessment for Effective Intervention*.

## About the Authors

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**Linda Friedlaender** has been Curator of Education at the Yale Center for British Art since 1995 and received recognition as co-producer of a program enhancing observational skills for medical students. She trains docents and creates programs that explain the Center's collection. Her children's books LOOK!LOOK!LOOK! and LOOK!LOOK!LOOK! at Sculpture are used throughout New Haven schools. She has a B.S. with honors from University of Michigan and M.S. in Education from Southern Connecticut State University.

**Don Glass, Ph.D.**, is the Research Manager for the Kennedy Center Division of Education where he leads the evaluation work on polling student audiences, ArtsEdge resources, and the national partnership networks. As the former Director of Evaluation at VSA, and a Universal Design for Learning Post-Doctoral Leadership Fellow, his work focuses on improving the design and evaluation of inclusive arts learning opportunities and supports. He is a visual artist, learning designer, and developmental evaluator who aims to support practitioner inquiry, data-use, and improvement routines in professional learning communities and across network sites so that we can collaboratively design what works for whom, under what conditions.

**Zachary Kandler** is a music therapist in New York City, specializing in work with children and adolescents with developmental differences. He received a Bachelor's degree in psychology from Vanderbilt University and a Master's degree in music psychotherapy from New York University. For the past five years, he has worked at Rebecca School, a therapeutic day school for children and adolescents with neurodevelopmental disorders of relating and communicating that follows Dr. Stanley Greenspan's DIR/Floortime™ model. While working at Rebecca School, Zachary became a certified Floortime™ practitioner, in addition to completing the post-graduate Nordoff-Robbins Music Therapy training. Nordoff-Robbins Music Therapy is a music psychotherapy model that specializes in the artistic and creative use of live and improvised music, within the context of a therapeutic relationship, to support the needs of a wide range of individuals. Zachary regularly presents his clinical and theoretical work at conferences devoted to music therapy, special education, and autism treatment.

**Katie Keddell** is the Access Coordinator for Imagination Stage, where she coordinates the education accessibility and inclusion infrastructures including classes, camps, discreet population residencies and Sensory-Friendly initiative. Katie Keddell is a teaching artist and advocate with over 10 years of experience focused on theatre accessibility for people of all abilities. Katie directed the Speak Out on Stage theatre devising program and eight productions for Chesapeake Shakespeare's High School Company. As a production manager and assistant director, Katie traveled to Morocco with the premier of an original play that consisted of a cast of 50% Moroccans and 50% Americans at the 34th Annual Theatre Festival of Casablanca. She has taught at San Diego State University, Chesapeake Shakespeare Company, La Jolla Playhouse, Imagination Stage, and a residency at The Ivymount School and Lourie Center. She also worked as a paraprofessional in the public school system, supporting students of all abilities for three years. Katie has in Master of Arts degree in Theatre from San Diego State University and a Bachelor of Arts in Theatre from Salisbury University.

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**Jennifer Kowitt** is a doctoral candidate in the Special Education Program, Department of Educational Psychology, at the Neag School of Education, University of Connecticut. Her research and practice interests include transition to adulthood and postsecondary education for students with disabilities, social skills instruction for adolescents and adults with Autism Spectrum Disorder (ASD), and out-of-school learning environments. Prior to coming to UCONN, she developed programs for people with disabilities of all ages at art museums including the Yale Center for British Art, New Haven, CT and the Brooklyn Museum in Brooklyn, NY. She has her B.A. in History of Art from Yale University and her M.A. in History of Art from the University of Bristol, England.

**Michelle Kraft, Ph.D.**, is a Professor of Art Education at Lubbock Christian University in Lubbock, Texas. She began her art teaching career at Dunbar High School, which housed the Life Transitions program for the school district. It was there that she first began to work with students experiencing a range of (dis)abilities and to explore the intersection of visual art and special education.

Michelle co-authored *Including Difference: A Communitarian Approach to Art Education in the Least Restrictive Environment* (National Art Education Association) with Karen Keifer-Boyd. She served on the John F. Kennedy Center for the Performing Arts' Office of VSA and Accessibility's Special Education Committee, which worked with the National Coalition for Core Arts Standards to shape national standards for fine arts to include learners experiencing disabilities.

Michelle has co-authored numerous journal articles and book chapters, including a chapter in *Matter Matters: Art Education and Material Culture Studies*, edited by Paul Bolin and Doug Blandy (National Art Education Association, 2012), and articles in *Visual Arts Research*, *The Journal for Social Theory in Art Education*, *The Journal for Cultural Theory in Art Education*, *Visual Culture & Gender*, and *Art Education*. She has served on the review board for several journals, including *The Journal for Social Theory in Art Education*, *Visual Arts Research*, and *Visual Culture & Gender*.

Michelle is the recipient of several grants and teaching awards. She is active in the National Association of Art Education and in the Texas Art Education Association (TAEA) and has presented at many conferences at the state and national levels. She has served as TAEA Chair of the Higher Education Division and as editor of TAEA's peer-refereed journal *Trends in Art Education*. In addition to teaching, Michelle has served as department chair and is currently the assistant dean for the J.E. & Eileen Hancock College of Liberal Arts and Education at Lubbock Christian University.

**Bridget Kiger Lee, Ph.D.**, is a Post-Doctoral Research Fellow at The Ohio State University with research interests in the effects of drama-based pedagogy on various academic-related outcomes, the processes by which teachers shift pedagogical practices and the effects on student outcomes, and the development and application of research on arts integration pedagogies for use in educational policy. She is part of an ongoing research team that is a partnership between OSU, the Royal Shakespeare Company, and Columbus area teachers.

In addition, she leads or co-leads multiple studies for research and evaluation, including Columbus Teaching and Learning Center focused on a research-practice partnership, the Freedom Schools focused on literacy and social justice, STEM across the Arts, and Literacy to Life. Bridget has been a middle school theatre teacher, AmeriCorps Integrating Arts/Integrated Education member, a teaching artist for over a decade, and Education Director for two different theaters. She earned her B.S. in Theatre and Learning Disabilities from Northwestern University, M.F.A. in Drama and Theatre for Youth, and her Ph.D. in Educational Psychology from The University of Texas at Austin. She has presented her work at American Educational Research Association, American Alliance for Theatre and Education, Literacy Research Association, as well as the Keynote Address for Southeast Center for Education in the Arts. Her publications appear in *Teaching and Teacher Education*, *Review of Educational Research*, *Research in Drama and Education*, *International Journal for Learning through the Arts*, and *Teaching Artist Journal*, among others. Her work on assessment in the arts was featured in *The Reflective Teaching Artist* (Dawson & Kellin, 2014) and her forthcoming co-authored book with Kathryn Dawson, *Drama-Based Pedagogy: Activating Learning Across the Curriculum*, focuses on the theoretical foundations of DBP and practical implementation in the classroom.

**Susan D. Loesl, MA, WATR, ATR-BC**, has been an Adaptive Arts Specialist/Art Therapist for the Milwaukee Public Schools in Milwaukee, Wisconsin for over 28 years. She collaborates with art, music, and special education teachers, as well as with other support staff such as occupational and physical therapists and speech and language pathologists. Through these collaborations, she develops opportunities for students with disabilities to be as independent as possible in their arts classes or while engaging in the arts in their special education classes. Susan is also an Art Therapy Undergraduate and Graduate Education Adjunct Faculty at Mount Mary University, Milwaukee, WI and a presenter at many national conferences related to persons with disabilities and adaptations of the arts. These include the American Art Therapy Association, National Art Education Association, Expressive Therapies Summit, Assistive Technology Industries Association, Council for Exceptional Children and various others. She has presented workshops throughout the United States and Puerto Rico through VSA Arts and various school districts, and in China through People to People International. Susan has been a consultant for teachers regarding adaptive arts strategies, including low to high tech adaptive tools in schools and organizations serving persons with disabilities across the United States. She also has collaborated for the past 22 years with the Milwaukee Institute of Art and Design Industrial Design students to develop unique adaptive tools for persons with disabilities. An author, she has three chapters in three books, with chapters on art adaptations for students with physical disabilities, adaptive art strategies for students with autism, working collaboratively with paraprofessionals and classroom assistants in the art classroom, and a white paper on the role of the Adaptive Art Specialist published in *The Intersection of Arts Education and Special Education: Exemplary Programs and Approaches* by the Kennedy Center for the Performing Arts/VSA.

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**Eve Müller, Ph.D.**, managed a community-based residential and integrated work programs for adults with developmental disabilities, including autism spectrum disorders (ASD), for more than five years. She completed her Ph.D. at the University of California at Berkeley in 2002, where she wrote her dissertation on how families use dinnertime conversations as a context for socializing their children with high-functioning ASD to talk about their own and others' thoughts and feelings. Since then, she has published extensively in the area of ASD, language development, and social and emotional learning. She worked for many years as a Senior Policy Analyst for the National Association of State Directors of Special Education (NASDSE) where she researched and wrote more than 80 articles on special education policy issues. For the past five years, she has served as Coordinator of Program Evaluation and Outcomes Research for the Ivymount School and Programs, where she works with program administrators to evaluate various intervention strategies, conducts alumni follow-up studies, develops social and emotional learning curricula and assessment instruments, supervises GWU doctoral interns, and collaborates with partner organizations such as NIH, Smithsonian Institute, 3C ISD, and Children's Hospital.

**Diane Nutting, MFA**, has taught, directed, and collaborated with K - Adult students and artists of all abilities for nearly 25 years, and she has a wide range of experience in the areas of disability, access, and inclusion within the performing arts. Most recently, she was the Director of Access and Inclusion for Imagination Stage, where for 9 years she worked to provide accessible and inclusive performing arts experiences for all students, patrons, and artists. Previously, she served as the Director of Education for City Theatre Company (Pittsburgh), and as the Associate Director of Education for the New Victory Theater (NYC). She holds an MFA in Drama and Theatre for Youth from the University of Texas at Austin, and degrees in Deaf Studies and Theatre from Boston University. Currently, Ms. Nutting serves as an independent trainer, consultant, and project coordinator for several organizations, including the Smithsonian Institution and the John F. Kennedy Center for the Performing Arts.

**Christopher Wenz, M.A.**, is a doctoral student in the department Curriculum and Instruction in the Neag School of Education at the University of Connecticut. His research interests include disciplinary literacy, reading difficulties in adolescents, and reading instruction for adolescents with ASD. Before beginning graduate work at UCONN, Chris taught English and history to high school students with Autism Spectrum Disorders and taught civics as an Americorps volunteer in the Boston Public Schools. He has a BA in history from Hampshire College and an MA in special education from UCONN.

# About the Kennedy Center Office of VSA and Accessibility

Serving the international disability and arts community, the John F. Kennedy Center for the Performing Arts Office of VSA and Accessibility provides opportunities for people with disabilities, of all ages, across the globe to learn through, participate in, and enjoy the arts. A Jean Kennedy Smith Arts and Disability program, the VSA and LEAD international networks support and offer a wide array of programs in cultural access, as well as the art and arts education programs and experiences for individuals with disabilities. Please visit us on the web at <http://education.kennedy-center.org/education/#Access>. Please like us on Facebook at <https://www.facebook.com/VSAInternational/>. Follow us on Instagram @vsainternational and on Twitter @vsaintl.

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