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An Exploration of Teaching Music to Individuals With Autism Spectrum Disorder

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An Exploration of Teaching Music to Individuals With Autism Spectrum Disorder

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DOCTOR OF PSYCHOLOGY

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Abstract

An Exploration of Teaching Music to Individuals With Autism Spectrum Disorder

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The purpose of this grounded-theory qualitative study was to explore how music teachers successfully work with students with autism spectrum disorder (ASD). Many individuals with ASD are impacted daily by social and communication difficulties, sensory sensitivities, executive functioning challenges, and restricted or rigid behaviors. Current research, literature, media, and ASD and music circles support that music is a powerful medium for individuals with ASD. Benefits of music for individuals with ASD include therapeutic advantages, various improvements in skills, social opportunities, emergence of gifts and talents, and emotional outlets. Regular exposure to learning music in the U.S. is typically through music lessons or classes. Therefore, it was critical to seek a better understanding of how individuals with ASD can receive optimal learning experiences for music. Using a qualitative grounded theory approach, interviews were conducted with four music teachers who currently teach individuals with ASD. The interviews were transcribed verbatim, and the transcriptions were analyzed. The data analysis yielded a theory drawn from both the unique and similar experiences shared by the music teachers. The participants have been successful in teaching their students with ASD because of the following three elements: *music as the goal* (fostering music

enjoyment and experience), *different levels of success* (acceptance of variable abilities and skills and adjusting expectations for each individual), and *positivity* (creating opportunities for empowerment and confidence). The participants also identified strategies that support and drive these elements: *concrete strategies* (tools used to accommodate needs), *stylistic strategies* (non-traditional and flexible teaching approaches), and *attitudinal strategies* (deeper understanding of students). These elements and strategies can be utilized as foundational guidelines for music teachers, giving them important material to consider if they plan to work with individuals with ASD. The electronic version of this dissertation is at OhioLink ETD Center, www.ohiolink.edu/etd

Dedication

I dedicate this dissertation to the children with autism spectrum disorder that I played music with while I was an undergraduate student. Because of them, I became inspired to explore the possibilities that music can bring to individuals with ASD as a graduate student. This dissertation is also dedicated to all individuals with ASD who enjoy music, to all music teachers who work with individuals with ASD, to music teachers who want to work with individuals with ASD, and to those who seek to further provide research and opportunities around music for individuals with ASD.

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I would also like to thank my participants for agreeing to participate in my study, for taking the time to share their very personal experiences and thoughts with me, and for the awesome work that they do with all of their students. Their work is truly inspiring, and I am fortunate to have had the chance to meet them and hear their amazing stories. I am excited about their contributions to the field of music and ASD and their continued efforts to provide opportunities to individuals with ASD.

I would like to thank my parents for always believing in me, fostering my passions for music and helping others throughout my life, and for instilling their values in me, making it possible for me to make it this far. I could not ask for any more than what my parents have done for me, and I cannot fully express the amount of gratitude I feel for

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Introduction

Autism Spectrum Disorder (ASD) is a pervasive developmental disorder characterized by impacts on social, communication, and behavioral functioning. It is identified as a neurodevelopmental disability. Individuals are diagnosed on a spectrum, depending on their level of functioning and how they are affected by symptoms. Diagnostic terms that are used to describe ASD include Autistic Disorder, Asperger's Disorder, and Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS). Individuals with a diagnosis of Autistic Disorder, also known as classic Autism, meet full diagnostic criteria for Autism. According to the Diagnostic Statistical Manual of Mental Disorders (DSM-IV, American Psychiatric Association, 2000), the specific criteria for Autistic Disorder includes significant impairments within social and communicative functions, repetitive or restricted behaviors and interests, and onset of symptoms occurring at the age of three years old or earlier. Individuals with Asperger's Disorder meet most criteria for Autistic Disorder, but typically do not exhibit significant challenges with language and communication and did not have delays in language during early development. They also do not usually present with clinically significant delays in cognitive development. Individuals with PDD-NOS do not meet full diagnostic criteria for a diagnosis of Autistic Disorder, however social, communication, and behavioral impairments are still present.

It is important to note that an updated version of the DSM has been released in 2013 (DSM-V). Revisions include some diagnostic changes for ASD. In the DSM-IV, Asperger's Disorder and PDD-NOS are considered under a different diagnostic code from Autistic Disorder due to the differences in criteria. However according to the

American Psychiatric Association (2013) within the new DSM-V, Asperger's Disorder and PDD-NOS is now under the same diagnostic umbrella as Autistic Disorder, with an emphasis on diagnosing on a spectrum based on "variations in symptoms and behaviors from person to person" (Autism Spectrum Disorder, 2013, para. 4). Other criteria changes include the requirement that symptoms are present in early childhood as a means to allow for earlier diagnosing of ASD. Furthermore, researchers believe that "a single umbrella disorder will improve the diagnosis of ASD without limiting the sensitivity of the criteria, or substantially changing the number of children being diagnosed" (Autism Spectrum Disorder, 2013, para. 3). For the purposes of this study focusing on music teachers who have worked with individuals with ASD, the new DSM-V diagnostic criteria do not necessarily impact the current study. It is assumed that students will have ASD diagnoses based on the previous DSM because the experiences of the teachers will be about their work prior to the rollout of the new DSM.

According to the Center for Disease Control and Prevention (CDC) the prevalence of reported ASD has been significantly rising over the past few decades, and in a recent study, "between 2007 and 2011-2012, the prevalence estimate for parent-reported ASD diagnoses among U.S. children ages six to 17 increased significantly from 1.16% to 2.00%" (Blumberg et al., 2013, p. 5). As of 2013, the CDC reported that ASD affects one in 88 children and is prevalent internationally and across all races and socioeconomic groups. Boys are five times more likely than girls to be diagnosed. Though there is no substantial evidence around the etiology or cause of autism, there is research that supports certain environmental, genetic, and biological risk factors that have been linked to autism. These risk factors include: genetics, immediate family (parents

and siblings) with ASD, having another genetic or chromosomal disorder, prenatal intake of certain prescription medications such as valporic acid or thalidomide by the birth mother, low birth-weight, or premature birth. According to the CDC, extensive research is currently being conducted around possible causes of ASD based on these known risk factors (Autism Spectrum Disorders: Facts about ASD, 2014).

When considering how symptoms impact individuals with ASD, various treatments, coping strategies, or other therapeutic interventions to alleviate, decrease, or manage symptoms are often explored. I am particularly interested in focusing on how to identify, maximize, and foster strengths for individuals with ASD, specifically through learning how to play music rather than focusing on the use of music for treatment purposes. This is a particular area of interest for me because I have played and enjoyed music for most of my life, because of my history and current work with individuals with ASD, because of my previous experience with piano teaching, and because of my past experience playing music with children with ASD. Music is a lifelong passion of mine, and working with individuals with ASD is a calling of mine. Current research in this area mostly focuses on how music can be used as an intervention or therapeutic tool for treating symptoms of ASD. However, should individuals with ASD show interest in learning music or exhibit musical strengths, research and literature are limited about how these individuals can be taught effectively and appropriately or have access to these types of opportunities. Music education and ASD is a relevant area of study because current research, anecdotal literature and reports, and media have shed some light on how music has been a conduit for success and an avenue for living meaningful lives for individuals with ASD.

Current literature around the benefits of music for individuals with ASD is abundant, however most of these studies fall in the areas of intervention and therapy for the treatment of ASD symptoms or skill building for areas of impairment. Other literature also suggests that many individuals with ASD demonstrate peculiar and superior musical skills, even demonstrating savant-like abilities in many cases. Some literature indicates that music can be a helpful tool to connect with individuals with ASD, who otherwise have difficulty with communication or social interaction. A more detailed and thorough description of the literature described will be provided in the literature review section.

Despite the current literature providing support around positive effects of music for individuals with ASD, research is limited regarding ways to provide applicable opportunities for these individuals to learn music or be a part of music communities. With these considerations, I wanted to explore the experiences of current music teachers who work with individuals with ASD to identify what tools and strategies they use when they teach these individuals if any. I wanted to investigate how music teachers might modify or make adjustments to their lesson plans, teaching styles, or curricula, when teaching students with ASD. Furthermore, I wanted to conduct an empirical study because research in this area is lacking. It is important to note that I wanted to particularly target music teachers and not music therapists for the purposes of this study; keeping in mind that the goal for music teachers is to teach music and focus on musical skills and content, and the goal for music therapists is to use music as a therapeutic tool for improving and building various functions and skills, not particularly for the purposes of music instruction. Though there may be some similarities and crossover in approaches

and outcomes between music therapy and music education/instruction, this study focuses on music education/instruction; the objective of music lessons is for music to be learned, appreciated, and enjoyed. Therapeutic effects or other skills besides musical skills that might develop because of music lessons are considered secondary outcomes and not primary objectives.

I proceeded with a grounded theory approach as a means to collect and analyze data through semi-structured interviews with music teachers who have experience working with students with ASD. I utilized this approach because it "offers explanation about phenomena" (Strauss & Corbin, 1998, p. 22). For the purposes of this project, the phenomena explored are the most effective, helpful, and meaningful music teaching styles for individuals with ASD. I gathered data as a means to educate and provide both music educators and ASD communities with specific approaches to teach music to individuals with ASD so that more opportunities for music involvement will be available to them. In taking a grounded theory approach for this project, the goal was to gather rich and relevant data through the interviews and construct an emergent theory about successful music teaching practices by music teachers who work with individuals with ASD based on the data.

Grounded Thoery

In the 1960's, Glasser and Strauss (1967) presented a new approach to generating theory from social research and called it grounded theory (pp. 2-3). Their motivations for this approach at the time were due to the emphasis and acceptance of social phenomena being understood, qualified, and deemed credible only through intensive quantitative research. Glasser and Strauss further explained:

> These many references to credibility enable us to controvert the frequent discrediting of the generating of grounded theory, with its associated flexible techniques and strategies of quantitative and qualitative research. This criticism stems from sociologists' taking as their guide to credibility the canons of rigorous quantitative verification on such issues as sampling, coding, reliability, validity, indicators, frequency distributions, conceptual formulation, hypothesis construction, and presentation of evidence. But in this book we have raised doubts about the applicability of these cannons of rigor as proper criteria for judging the credibility of theory based on flexible research. We have suggested that criteria of judgment be based instead on the detailed elements of the actual strategies used for collecting, coding, analyzing, and presenting data when generating theory, and on the way in which people read the theory. (1967, p. 224)

Thus, a movement towards the use and credibility of grounded theory would follow.

In her book, *Constructing Grounded Theory,* Charmaz (2006) discussed the construction process of a grounded theory, focusing on gathering rich data from individuals within their situational and social contexts. She also focused on the process of coding as a means to bring to the surface possible meanings and indications within the data (Charmaz, 2006). She further discussed the importance of memos to compare the data and explore codes for continued analysis of data and to begin to construct categories within the data. This would then lead to theoretical sampling to crystalize categories, which would then provide substance for creating a grounded theory (Charmaz, 2006). I followed Charmaz's grounded theory approach, particularly because this semi-structured, yet open-ended format allows for exploration of a particular social phenomenon that is most appropriate for the main research question: How do music teachers who have worked with individuals with ASD, effectively and successfully teach music to their Students with ASD? The social impacts of an emergent theory will be pertinent and crucial to ASD communities, music educators, and music communities.

Literature Review

Music Advantages for Individuals With ASD

The advantages of music for individuals with ASD have been investigated and explored mostly around its therapeutic benefits and usefulness in treatment. Accordino, Comer, and Heller (2007) utilized a narrative approach in conducting a comprehensive literature review of music therapy (MT) and its use for treatment with individuals with autism. They explained that a majority of the studies and literature found in this area of study were written in this fashion. They further stated that approaching their review of the literature in this way would allow for a more thorough evaluation and inclusion of pertinent details of the reviewed studies. Studies and case reviews were grouped into categories based on specific autism symptoms that were targeted when using MT. Studies reviewed included research in which various individuals with autism demonstrated improvements in areas of social, behavioral, communicative, motor, and adaptive abilities. However, the authors explained that a majority of the research studies found were of individual case studies. They suggested that further investigation of the effectiveness of MT with individuals with autism should include more empirical and generalizable support.

Boso, Emanuele, Minazzi, Abbamonte, and Politi (2007) investigated the effects of a long-term active music therapy program on behavior profiles for eight young adults with severe autism spectrum disorder (ASD) with no previous music training, and also the effects of active music teaching on musical ability. Scores based on the Clinical Global Impression scale (CGI) and the Brief Psychiatric Rating Scale (BPRS) were used to measure behavior and completed by the psychiatrist of each participant. The

psychiatrist was considered an external rater who did not participate in the music sessions. A music skills questionnaire was independently completed for each participant by an external rater, who was considered a music expert. Scores on the CGI, BPRS, and music skills questionnaire were analyzed in three tiers: the first tier (T1) represented the baseline scores before music therapy began, the second tier (T2) included scores after six months of music therapy, and the last tier (T3) included ratings at the end of the treatment. The results indicated significant improvements on behavior scales and music skills at the end of the 52-week program for the participants. The authors reported significant changes after six months from the beginning of the program, but no significant changes were evident between the six-month mark and the end of the program, yielding a plateau effect after six months. They suggested that if further research continues to see this plateau effect, additional interventions should be used aside from music therapy. The authors stated that limitations in their study included their small sample size and having no parallel control group. Threats to internal validity should be considered for this study due to the lack of a parallel control group It is also important to note that it was not clarified as to whether or not the raters of the behaviors and skills scales were naïve to the nature of the study.

To investigate the effectiveness of music intervention for social responsiveness and social avoidance, Finnigan and Starr (2010) created a single-subject study, working with a preschool-aged child with autism as their participant. They compared music intervention (using familiar melodies, songs, guitar playing, and lyrics with toys) with non-music intervention (using spoken scripts and words similar to familiar songs but without singing with toys). All treatments were conducted by one music therapist

(including the non-music interventions) and supported but not prompted by the child's mother and behavior therapist. The child's behavior was observed over the course of four phases: Phase A was the baseline phase in which social responsiveness and avoidance behaviors were observed without prompting and instruction by the therapist for eight sessions; during Phase B, music and non-music interventions were implemented randomly over twelve sessions and responsiveness and avoidance behaviors were observed; for Phase C, toys that were used in what was determined to be the less effective treatment from Phase B were used in the more effective intervention determined from Phase B over seven sessions, and responsiveness and avoidance behaviors were observed; during Phase D, the child participated in two follow-up sessions which were the same as the baseline conditions from Phase A, and responsiveness and avoidance behaviors were observed to determine sustainability. Across all phases, social responsiveness was divided into three categories: eye contact, which was measured in frequency; imitation, which was measured in percentage of the opportunities present; and turn-taking, which was also measured in percentage (adapted from Duffy & Fuller, 2000). Avoidance behaviors were also categorized: gaze aversion, pushing away toy, and moving away, which were all measured in frequency (adapted from Koegel, Dyer, & Bell, 1987). Sessions across all phases were video taped. Inter-observer agreement was measured for responsiveness and avoidant behaviors of the child, which included ratings of a behavior therapist who was blind to the study and ratings of the authors. It is important to note that it was implied, but not clearly identified that one of the authors was the other rater. The authors found music intervention to be more effective than the non-music intervention in increasing social responsiveness. No avoidant behaviors were present

during the music intervention. For this participant, music therapy appeared more motivating than therapy without music. Stated limitations of the study included the difficulty of generalizing a single-subject design and the absence of measuring whether or not behavior can be generalized to other settings without the presence of the music therapist.

To further explore the implications of music therapy for children with ASD, Kim, Wigram, and Gold (2009) compared improvisational music therapy with toy play for ten children ages three to five with autism. The children had no previous music therapy or toy-play therapy exposure and were recruited from the Department of Child and Adolescent Psychiatry at Seoul National University Hospital, Korea. Each child participated in 30-minute toy play and improvisational music therapy sessions for 12 weeks for each condition. Each session was structured so that the first part of the session was more child directed and the second part was more therapist directed. To avoid bias and familiarity, a different therapist was used in each condition. "A semi-flexible treatment manual" was provided for "consistency and comparability across conditions" (Kim et al., 2009, p. 394). Using a cross-over design, the children were randomly assigned to a group: group one consisted of music sessions (interactions mainly through music) first and toy sessions (interactions by any means except for music, avoiding any singing or rhythmic play) later, and group two consisted of toy play sessions first and music sessions later. Four-minute video samples from the child-directed portion and from the therapist-directed portion from sessions one, four, eight, and 12 were shown to raters. Raters included the author and a research assistant. The research assistant was trained by the author to establish and ensure close agreement between both observers.

The research assistant was naïve to the order of the presented sessions, though it was not stated if the assistant was naïve to the purpose of the study. Target behaviors were measured in terms of frequency and duration and were coded during episodes of joint engagement between the child, the therapist, and the object or event. Observed behaviors were separated into two categories: emotional and motivational responsiveness (looking specifically at "joy, emotional synchronicity, and initiation of engagement"), and responsiveness to initiations of interactions of the therapist (looking specifically at "social invitation and interpersonal demands"). To analyze the data, a repeated measures ANOVA was utilized to determine effects of the two types of treatment on child behaviors. The authors found a significant difference between improvisational music therapy and toy play sessions. Particularly, they found that music therapy produced more and longer "joy, emotional synchronicity, and initiation of engagement" behaviors in the children. The authors suggested that these findings provide a foundation for further exploration around musical attunement to improve social development for children with autism.

Other considerations regarding autism and music include how music can be a positive activity for highly impacted individuals with ASD. Ter Bogt et al. (2009) focused on a 40-year-old woman who was diagnosed with autism spectrum disorder (ASD) at the age of three. She was considered in the severe, low-functioning range of the spectrum, exhibiting lack of speech, poor social interactions, rigidity, and abnormal motor movements and vocalizations. The authors cited studies describing high-functioning individuals with ASD demonstrating distinct and creative musical abilities, however, this was not as prevalent with lower functioning individuals with ASD.

Though their participant did not receive any formal music training, she displayed musical ability by the age of three, composing her own pieces on the piano. She continued to compose her own music into her adulthood. The authors stated that although there was not much variation in compositions, and she would only play her own compositions when approaching the piano, there were elements of complexity and creativity in her compositions, as well as indicators of non-verbal communicative engagement when she would play.

Another benefit of music for individuals with ASD that has been investigated is how music can help improve language and communication. Lim (2010) discussed and cited various literature describing common deficits of individuals with Autism Spectrum Disorders (ASD), particularly in the areas of speech and language. The extensive and effective use of music interventions for children with ASD shown in previous research was also described. Limitations discussed included the lack of studies with experimental controls, ample sample sizes, and sound statistical methods. Lim also described research supporting that children with ASD often have intact auditory systems that process various sounds such as music and speech patterns. To further explore the relationship between music and language development for children with ASD, Lim compared music training, speech training, and no training in speech development. His participants included fifty children with ASD, ages three to five years old who were previously evaluated using standardized measures for language functioning levels. The children were recruited from different treatment agencies that specialized in ASD and were randomly assigned to one of the training conditions. Children who were in the music-training condition were shown a music-based training video two times a day for three days. Those who were in

the speech-training group were shown a speech-based training video two times a day for three days as well. Children who were in the no-training control group were not shown either music or speech trainings for three consecutive days. A pre-test and post-test were administered to all of the participants, which included a verbal production evaluation scale. Results indicated that music and speech trainings both significantly improved verbal production and that lower functioning children with ASD showed an even greater increase with music training than with speech training. Results also indicated that music provided more predictable sequential patterns and structural characteristics, making it easier for especially the lower functioning participants to perceive language and improve functional speech.

Other benefits that have been explored regarding how music can be used as a tool to improve areas of impairment for individuals with ASD include the exploration of neurological pathways. Wan, Demaine, Zipse, Norton, and Schlaug (2010) described the characteristics of deficits often found in individuals with autism, particularly areas of social, communication, and understanding of theory of mind. They offered a theory that these impairments might be related to a dysfunction of the mirror neuron system (MNS). According to previous research, the MNS is located in the Broca's area of the brain and is linked to complex cognitive processes such as understanding motor actions of others, language, and imitation (seeing, hearing, and doing). These processes are common areas of impairment in individuals with autism. The authors further explained that when intact, the MNS serves as a hub of firing neurons that allows humans to perceive speech in a multi-modal manner through processing bodily and mouth movements as well as auditory stimuli from another person. This has been supported by neuro-imaging research.

Furthermore, additional research also indicates that individuals engaged in music activate areas of the MNS. The authors further cited research, supporting music as a medium for emotional and social engagement. They suggested that music can be a potential vehicle in engaging the MNS in individuals with autism and encouraged the exploration of auditory-motor mapping training (AMMT) for this population. AMMT is currently used for rehabilitating language for individuals with aphasia. AMMT incorporates singing, imitation, and motor activity to improve language skills, which are all target areas of the MNS.

The benefits of music have also been represented in the media. Recently, an 11-year-old girl with a diagnosis of autism was featured in a special event called "Night of Too Many Stars" that was aired on the Comedy Central ® network (Jodi DiPiazza, 2012). The event included numerous stars and celebrities who performed to raise funds for autism awareness. The segment about the 11-year-old girl, Jodi DiPiazza, featured her story from being diagnosed with autism when she was two years old, to her and her family's struggles with her challenges and deficits throughout the years, and the imperativeness of the early and intensive intervention that she received. Because of this, her musical talent and passion were eventually discovered. Finally, the focus turned to her interest and peculiar gift for music. The segment shared that having the opportunity to play music and sing has been fulfilling for DiPiazza, and ultimately it makes her feel happy despite her struggles living with autism. A live performance duet with the DiPiazza and the pop music singer, Katy Perry, followed. There was a standing ovation by the audience who were in awe of the talented girl.

The current literature and support, both empirical and anecdotal, encourage that music can be a benefit for individuals with ASD in numerous ways. There are therapeutic benefits, skill-building benefits, and benefits to well being. As the research continues to grow in this area of study, the more the awareness of the benefits of music can potentially increase within music communities and ASD communities. The hope is that this awareness will then bridge these communities to provide opportunities for individuals with ASD to utilize music as a positive tool and outlet.

Music Education for Individuals With ASD

Literature regarding music education for individuals with ASD primarily includes suggestions for teaching music in a classroom setting for children with special needs. A majority of authors within this set of literature are music professors or instructors who are particularly vested and interested in this area. There is a lack of empirical research in this area, however the current anecdotal literature suggests that there is a need for further investigation of teaching music to individuals with ASD. Clements-Cortes (2012), a music professor, discussed previous research about the benefits of music for treating social and communication challenges for children with ASD. She also described research regarding effective and conducive classroom settings for individuals with ASD. For example, she discussed Adamek and Darrow's (2007) suggestions for using visuals tools in the classroom such as visual aids for class rules, visual schedules for activities, teachers modeling movements for students to imitate directly, or using pictures to go along with songs so that students will know what to anticipate or choose. She further described suggestions made by other authors about creating a classroom that is inclusive and can provide support people for children with ASD. Some suggestions included

varying the level of expectation for participation, providing choices when giving input, adapt expectations or goals depending on the child's functioning, keep distractions in the classroom to a minimum if possible, and providing extra or increased support if need like setting students up with music buddies. In addition, Clements-Cortes conducted an interview with an experienced special needs teacher who was also training in music therapy as a means to gather specific suggestions around classroom modifications and accommodations that best worked for her and her students in her experience teaching children with special needs. Some of the suggestions included making modifications to curriculum, participation, and level of expectations based on the student's needs, abilities, and areas of strength. Though Clements-Cortes did not utilize any formal research methods or data analysis, she provided initial information that is pertinent to further exploration of strategies and structures for music teachers when teaching individuals with ASD. The following literature will include specific suggestions as examined by various authors.

Adamer (2001) provided a set of guidelines for teaching regarding inclusion of students with special needs in general education music classrooms. She emphasized the importance of music teachers being knowledgeable about their incoming students with special needs, such as communicating with other teachers who have worked with the children and becoming familiar with information from their Individualized Education Plans (IEP). Information in an IEP might include skills that the student is working on such as particular behaviors, goals towards independence, increasing cooperation, etc. Adamer suggested that being familiar with a student's objectives would help in including the student in ways that he or she will optimally learn. She also recommended that music

teachers understand a student's strengths and positive characteristics as a means to maximize on these abilities when engaging them in music learning. Adamer further discussed the need for music teachers to consider making adaptations in the following areas for students with special needs: level of participation, difficulty and skill level, level of support, delivery of input to the particular student, goal setting, and materials used. Though Adamer did not specifically target children with ASD in her writing, it is relevant to the current study in that she emphasized the need for music teachers to take similar considerations when working with children with ASD as their needs are often particular and specific and typically qualify for IEPs depending on level of functioning.

Price (2010) described that because individuals diagnosed with ASD often drastically range in functioning, it is difficult to pinpoint explicit strategies that would work for all individuals with ASD when teaching music. He explained that despite there being no particular structured methods for teaching in this arena, there are general ways to proceed in teaching music while considering abilities, skills, and functioning of individuals with ASD. In his article, Price (2010) created a thought piece based on his own teaching experience in which he suggested that music teachers should focus on perspective taking, vocabulary use, being precise and clear in communication, and establishing detailed routines and schedules. He described that in his own experience, the process of creating these types of lesson plans takes a great deal of time, energy, fore planning, and flexibility to immediately react and improvise when need be. He explained that the more that music teachers are willing to put forth this effort, the more and better the ASD population would be served and have opportunities to meaningfully be involved in the art of music.

Also based on his own music teaching experience and working with individuals with ASD, Iseminger (2009) explained in his thought piece the importance of music teachers in classrooms creating a setting and environment that would be most conducive for individuals with ASD; particularly considering their emotional, physical, and safety needs. He further discussed the structure within a classroom such as having seating assignments for the child to sit throughout that school year. He also suggested having more than one seat for children who tend to have trouble sitting in one place so that he or she has the option of moving between places. For children who refuse to sit in a chair, Iseminger proposed giving them choices between a chair or carpet square so that they will still be required to sit within the limits of the teacher, but they will have some control over where to sit. Iseminger recommended for music teachers to have consistent routines for each class to provide predictability and security. He also recommended the use of visual aids to concretize the information that is being taught, which in turn, creates structure and predictability of the content. Iseminger further explained the importance of preparing for instances of change or of the unknown, such as providing a calendar showing when changes in routine might occur. He also mentioned that the teacher should go over ahead of time that change would be coming and creating a social story about how to handle the change or unknown that might occur. Finally, Iseminger suggested taking sensory sensitivities into consideration such as textures, sounds, or visual inputs that might be overwhelming to children with ASD. Such considerations might include turning off computer monitors, providing headphones that can help bring down noise levels, lowering lights, or providing sandbags or beanbags for deep pressure.

Hourigan and Hourigan (2009) discussed the implications of ASD and previous literature that suggested that music teachers and therapists identify many individuals with ASD as having strong skills and niches in music and a level of responsiveness to music that is significantly better than what would be expected of typical peers. This was also based on their encounters and work with various music educators. Hourigan and Hourigan explained that the challenge that music teachers face is how to foster and channel these talents despite impairments, deficits, and difficulties that many individuals with ASD face. Hourigan and Hourigan further described ways that music educators can adapt their teaching methods to meet the needs of and meaningfully teach music to their Students with ASD based on current research on educating children with autism, research on music therapy, current projects and programs for music education for children with autism, and on their own work in providing music therapy for children with autism. Suggestions included: adjusting communication styles or implementing communication tools such as using visuals or picture systems, understanding how to manage particular behaviors and triggers, teaching other students to model expected behavior and provide cues to the student around following directions and rules, gathering information from other teachers around how the student best learns skills and what types of systems can be put in place (i.e., rewards/incentives, checklists, need for an aide, etc.), understanding how the student responds to sensory input, and providing an appropriate dynamic peer social setting within the classroom such as having other students rotate in assisting the ASD student with group activities. Hourigan and Hourigan also emphasized the importance working closely with the teams of their Students with ASD as a means to understand their strengths, challenges, and what works well for the child, being familiar

with the child's IEP, and also understanding the special education system of their school districts.

Nelson (2012) discussed methods used by music teachers who work individually and in groups with Students with ASD, particularly learning to play stringed instruments. Some teachers suggested providing structure and being clear about expectations from the beginning of lessons, being friendly while also giving space to provide a relaxing environment, and following through on the provided structured schedule throughout the lesson. They also suggested providing visual cues such as writing down the schedule to be expected and listing the events and tasks that will occur for each lesson. An orchestra director recommended using concrete language and clear language when giving directions. Other teachers also recommended being aware of sensory issues and body language and non-verbal communication challenges. Overall, the music teachers described in Nelson's article also discussed their appreciation for working with Students with ASD and the reward of providing opportunities for them to share their gifts and talents in the arts.

Hagedorn (2004) provided suggestions for teaching individuals with ASD in a music classroom based on previous research and her own music teaching experience with individuals with ASD. She described the benefits of utilizing structure and routine such as following a regular sequence throughout the class. This can especially be helpful for transitions. Hagedorn also discussed singing specific songs for tasks such as putting things away or ending the day. Furthermore, Hagedorn explained how visual tools could be of great assistance for representing expectations, schedules, and lessons. In particular,

Hagedorn discussed her utilization of picture books to increase motivation to attend and participate in class. Hagedorn further explained:

> I use these books to provide opportunities for students to vocalize appropriately, to work on sequencing skills, to motivate students into guided movement, and to encourage instrument playing and sound exploration. Responding to the actions in the books allows the child to engage in an activity musically but without the pressure of providing the 'right' response. (Hagedorn, 2004, p. 46)

She continued to discuss the communication and social benefits, as well as the increase in participation of students with ASD through the use of picture books. Because of the visual inclination of individuals with ASD, Hagedorn suggested that the use of pictures books is an appropriate tool.

Hammel (2001) discussed previous research about competencies of music teachers who work with individuals with disabilities in the classroom, indicating that taking extra courses, having additional experience in the field, and identifying particular competencies have increased competencies in music teachers for including students with special needs in their classes. Hammel explained that her research would focus on bettering the preparation of music teachers in their inclusion of students with special needs. She sought to understand if courses that are taught to prepare and introduce these teachers to competencies, as well as fieldwork required in undergraduate music programs, are aligned with current competencies that are imperative for music teachers in their classrooms in the inclusion of students with special needs. Hammel utilized an ethnographic approach by administering researcher-designed surveys to elementary school music teachers and faculty of undergraduate elementary music education programs to identify teacher competencies, interviewing current elementary school teachers, observing students with special needs in music classrooms, and gathering

syllabi from faculty who teach undergraduate music education classes and focus on including students with special needs.

Based on her findings, Hammel (2001) identified specific competencies that were considered essential by music teachers and faculty in colleges and universities: having a general understanding of various disabilities, understanding the legal facets of the 'Individuals with Disabilities ACT (IDEA)' (p. 11), understanding one's role in the assessment team, being able to informally construct and utilize procedures for assessment, being able to track and observe the learning processes of students, being able to assess how effective programs are for students with special needs, being able to identify student challenges, being able to make modifications and accommodations to lesson plans if needed, understanding how to make modifications to the classroom to meet the needs of students with special needs, being able to support social opportunities for all of the students, understanding methods to effective manage a classroom, understanding materials that are best fit for different learning capabilities and approaches, being able to include and utilize materials for individuals with different learning styles, and being able to communicate well with the educational team and support. Hammel discussed that inclusion of these competencies in music education college programs can better prepare potential music teachers for peculiar situations that might arise for them in their teaching futures.

Based on the current literature, it is clear that many music teachers with experience working with students with ASD eventually gather specific strategies and methods that help them work best with individuals with ASD over time. As more music teachers come forward with successful teaching approaches for students with ASD,

newer teachers who will be working with students with ASD will benefit from being trained and learning from this information.

Teaching Individuals With ASD

There is also some literature regarding methods and approaches for teaching individuals with ASD in a classroom setting or for teaching skills. It was important to explore this literature as well because of the teaching component in music lessons. It is plausible that methods used by other teachers in other disciplines could be useful to those who teach music.

Darretxe and Sepulveda (2011) discussed the challenges that individuals with ASD often experience, drawing from clinical diagnostic criteria as well as particular cases of children with ASD. The challenges they focused on were "'the theory of mind', 'central coherence', and 'executive functions'" (p. 875). Theory of mind was described as an individual's ability to distinguish his or her own mental state from another's and understand the differences, which then allows the individual to predict the other person's behavior based on this understanding. Central coherence was described as the ability to understand situations or the meaning of something by gathering more information rather than just focusing on what is present. Executive functions were explained as being the functions needed to plan, organize, and problem solve in order to attain goals.

According to Darretxe and Sepulveda (2011), understanding these challenges can help narrow down ways to teach children with ASD effectively. With their knowledge of ASD and understanding of teaching approaches, Darretxe and Sepulveda provided suggestions for addressing the aforementioned challenges and teaching effectively. They suggested for teachers to make surroundings as predictable and structured as possible, to

communicate clearly and directly, to provide instruction and guidance around peer group situations, and to understand and be patient with needs and challenges of students with ASD. They emphasized that because every individual is different, educational plans should be tailored and planned to each individual needs and that team involvement for the individual is essential. The team should include the individual, the individual's family, teachers, school staff, other professionals, and anyone else who knows the individual well.

Kagohara et al. (2012) reviewed empirical studies that examined the use of iPods ©, iPod Touches ©, iPod Nanos ©, iPhones ©, or iPads © devices for the purposes of teaching new skills to individuals with developmental disabilities (autism, ASD, intellectual disabilities, and cerebral palsy). Specifically, skills that were targeted and were improved by these technologies in the studies included academic skills, communication skills, developing employment skills, leisure skills, and transitioning. Kagoharha et al. also discussed limitations of the reviewed studies, which included small sample sizes, a wide range in ages of participants, and a broad range of abilities and functioning of the participants. They also identified the lack of research for individuals with more profound or multiple disabilities. In addition, they also discussed gaps in the literature regarding teaching social skills and daily-living skills, as well as a lack of studies supporting effectiveness of actual applications within the devices used to teach academics skills. Kagoharha et al. concluded that overall, these devices were particularly superior to other technologies as intervention systems due to their availability, convenience, price, intuitiveness, usability, social acceptance (decreasing chances of being stigmatized), and the enjoyment that many of the individuals exhibited when using

the device. Challenges include the necessity to understand the technology and the potential for individuals to be disrupted if any damage or malfunction of the device should occur.

Regarding teaching individuals with ASD, the literature suggests that teachers make modifications to curricula or include supplemental approaches and alternatives to traditional teaching. Further, the literature implies that this will generate better teaching by teachers who work with individuals with ASD and better learning outcomes of individuals with ASD. These considerations are important for ASD communities and music communities in that similar approaches to teaching music may be impactful as well.

When considering the available literature around the benefits of music for individuals with ASD, music education for individuals with ASD, and general teaching for individuals with ASD, there are some clear themes and commonalities. Similarities include: understanding individual strengths and challenges for each student with ASD, making adaptations to lesson plans depending on skill level and functioning, adjusting communication style such as speaking more directly and clearly, utilizing visual aids, maximizing strengths, and decreasing sensory distractions. Research regarding music and autism tends to focus on the area of music therapy and the use of music as a tool for treatment and therapeutic benefits, and focus less on the areas of effective music instruction and opportunities for music enjoyment and learning for individuals with ASD. There is an apparent gap in the literature regarding empirical studies in this area. Suggestions that were made by most of the authors described in the current literature review regarding music instruction for individuals with ASD were not based on

systematic data collection or analysis, but rather on anecdotal accounts or thought pieces based on experience. This current project will contribute to filling this gap by approaching the area of music teaching and ASD with empirical research that will include systematic data collection and formal analysis of the data. Data collection and analysis will be conducted based on a grounded theory approach that will be further described in the methods section below.

Methods

For this study, I utilized a qualitative grounded theory approach to identify emergent themes regarding teaching methods and styles among music teachers who work with individuals with ASD. Grounded theory was appropriate for this study as a means to begin filling the gap within the literature that is limited around this topic. Grounded theory allows for investigating potential concepts and meanings that emerge from rich data that have yet to be explored. Specifically, this approach allows for creating substantive theory of an area of study that has yet to be empirically explored. Below are my specific methods for proceeding with a grounded theory approach to explore how music teachers effectively and successfully work with individuals with ASD.

Participants

For the initial process of finding participants, I used what Strauss and Corbin (1998) described as practical *open sampling*, which is based on systematically approaching potential participants depending on the research question and accessibility of potential participants. Strauss and Corbin (1998) further explained that there would likely be "ample opportunity for making comparisons based on emerging concepts" (p. 209) due to the natural variance of different situations. Similarly, Bryant and Charmaz (2007) described *convenience sampling*, which is the initial process of sampling through selection of participants based on accessibility and to "identify the scope, major components, and trajectory of the overall process" (p. 235). I targeted music teachers who currently work with individuals with ASD. Music teachers were recruited through an internet-based search and through referrals from various ASD and music-teaching communities within the King County area. My internet searches included some of the

following search terms: “music teachers ASD Seattle,” “music teachers autism Washington State,” “music lessons ASD King County,” etc. I came across various websites of teachers who identified themselves as working with individuals with ASD and contacted them via email if they provided any contact information. I was also given contact information of piano teachers directly from individuals from an ASD community. My initial contact via email briefly explained the topic of my study and provided my contact information (email and phone number), as well as my written consent form that detailed the nature of my study (Appendix A). I asked potential participants to then contact me if they were interested in participating in my study. Four out of six music teachers who were contacted responded to my initial contact. Prior to beginning the interview process, the music teachers who responded were asked to go over the written consent that explained expectations of the interview process, as well as confidentiality practices and specific rights (Appendix B). To proceed with the interview, the potential participants were asked to first sign the last page of the consent form to confirm participation in the study, to indicate that they had a clear understanding of study and rights, and to indicate that they had an understanding of any potential but minimal risks. They were then asked to return the signed page to me the day of their interviews. All four of the participants who responded to my initial contact consented to participate in my study and proceeded with the interviews.

After full consent was given, I conducted the interviews with the consenting music teachers. All of the teachers had their own home music studios and all interviews were conducted at each of their studios. The interviews lasted between 1½ to 2 hours. All of the interviews were recorded using a digital recording device with the consent of

the participants. Although I had a notebook to write down any pertinent information during the interviews and a list of the guided questions in case there was additional information that I needed to gather, the interview process was loosely structured with my questions mostly being open-ended. This allowed for the participants to share an abundance of information without feeling limited in their responses. For the purposes of privacy and confidentiality, all participants and any students discussed were de-identified. Throughout the current study, pseudonyms were used to distinguish the differences between each participant.

According to Strauss and Corbin (1998) and Bryant and Charmaz (2007), sampling should continue until *saturation* of data is attained. Bryant and Charmaz (2007) further explained theoretical *saturation*:

> The constant comparison of interchangeable indicators in the data yields the properties and dimensions of each category or concept. This process of constant comparison continues until no new properties or dimensions are emerging. (p. 281)

Corbin and Strauss (1998) described *saturation* as:

> (a) no new or relevant data seem to emerge regarding a category, (b) the category is well developed in terms of its properties and dimensions demonstrating variation, and (c) the relationships among categories are well established and validated. (p. 212)

The first participant (Sally) reported having approximately thirty-five years of music teaching experience. She also shared that she currently has one student with ASD and that she has no other prior experience extensively teaching music to individuals with ASD. The second participant (Sue) reported having approximately fourteen years of music teaching experience, and she currently has six students with ASD. The third

participant (Jane) reported having over thirty years of music teaching experience, and she currently has twenty-eight students with ASD.

I then followed what Strauss and Corbin (1998) explained as *discriminant sampling* in which I selected an additional participant based on information that emerged from data analysis from the initial sample towards saturation. I identified categories and subcategories that were focused on elements of teaching from non-traditional approaches and tailoring lessons to the strengths and challenges of the students. Based on this sampling process, I decided to consult with another participant to continue investigating possible emergent themes. The fourth participant (Joe) is a drum teacher with approximately thirty years of experience. He currently has eleven students with ASD. I also thought it would be important to particularly interview Joe to explore his responses as a drum teacher in comparison to the other teachers who all teach piano. For the purposes of this study, four participants were sampled overall. When making my final decisions about my sample, I considered clarification about theoretical saturation according to Corbin and Strauss (1998):

> In reality, if one looked long and hard enough one always would find additional properties or dimensions. There always is that potential for the 'new' to emerge. Saturation is more a matter of reaching the point in the research where collecting additional data seems counterproductive; the 'new' that is uncovered does not add that much more to the explanation at this time. Or, as is sometimes the situation, the research runs out of time, money, or both. (p. 136)

All of the teachers reported having some type of personal experience with individuals with ASD in their lives and personal experience prior to teaching. However, their experiences ranged from limited to extensive. All except one teacher reported having their own children with ASD, and they further shared that some of their teaching approaches and understanding of ASD stemmed from their own personal experiences.

All of the teachers discussed their experiences as musicians prior to teaching and their current experiences as performers, accompanists, band members, and recording artists as well. Overall, it was revealed that all of the participants utilized particular strategies and approaches in their teachings. This will be further explained in the results and discussion section.

Materials and Procedure

I followed a grounded theory approach for this project, gathering data through *intensive interviewing*. Though intensive interviewing can be utilized in other qualitative approaches, grounded theory was most appropriate for this project due to the nature of the research question. Creswell (2007) explained:

> Participants in the study would all have experienced the process and the development of the theory might help explain practice or provide a framework for further research. A key idea is that this theory-development does not come 'off the shelf,' but rather is generated or 'grounded' in data from participants who have experienced the process. (p. 63)

This procedure is relevant to the current project in that "*intensive interviewing* permits an in-depth exploration of a particular topic or experience and, thus, is a useful method for interpretive inquiry" (Charmaz, 2006, p. 25). Because my goal was to explore the specific experiences of music teachers, it was expected that *intensive interviewing* would provide rich data through allowing participants to reflect on and share information about their own experiences teaching individuals with ASD. Similar to what Charmaz (2006) explained, I followed a semi-structured format for the interview process, having specific sets of questions while also proceeding with follow-up, inquiry, and exploratory questions and statements. This allowed for deeper reflections on experiences. *Intensive interviewing* permitted the emergence of substantial information for the purposes of

grounded theory. Charmaz (2006, p. 25) further suggested that, "grounded theory interviewing differs from much in-depth interviewing because we narrow the range of interview topics to gather specific data for developing our theoretical frameworks as we proceed with conducting the interviews." Questions adapted from Charmaz (2006) included but were not limited to:

Initial open-ended questions:

1. Please share how you came to teach music.
2. How long have you been working with children with ASD?
3. What did you know about ASD before you began teaching children with ASD?
4. When did you first experience working with children with ASD and what was that like?

Intermediate questions:

1. Please share how you go about teaching music to children with ASD. What methods, strategies, curricula, tools, or trainings do you use?
2. Do you adjust your lessons or teachings styles when you work with individuals with ASD? If so, how do you do it and why?
3. What are outcomes that have resulted from your way of teaching children with ASD?
4. What current challenges come up when you teach music to children with ASD? How do you manage these challenges?

Ending questions:

1. After having these experiences, what advice would you give other music teachers who are interested in teaching individuals with ASD?
2. Is there any more information that you think I should know more about?
3. Do you have anything that you would like to ask me?
4. Who are other music teachers that I might be able to talk to who also have experience working with children with ASD?

By using a grounded theory approach, I potentially have provided foundational theory and support for how music can be cultivated for individuals with ASD. Results from this project can be a stepping-stone towards further research around how individuals with ASD can be best supported, trained, and educated in music.

Privacy protection. The recorded interviews were transferred and saved to my password-protected personal computer. I then transcribed the interviews verbatim, saved and encrypted them as electronic documents on the same computer as well as on an encrypted back-up drive, and printed hard copies of them. The hard copies were kept in a three-ring binder, which was secured in a locked box when not being used. The back-up drive, digital recorder with the original interview recordings, and the signed consent forms were also kept in the same box when not in use. The hard-copy transcriptions were utilized as the primary data for the data analysis process. I did not use names on any of the documents for the purposes of privacy and confidentiality. I marked each interview by order of interview given and utilized one-letter identifiers so I could distinguish the differences between my questions and responses and the questions and responses of my participants. As previously mentioned, within this study pseudonyms were utilized for

the privacy protection of the participants and their students. After three years from the completion of this study, or seven years if the results are published, I will destroy all of the research materials.

Background of the interviewer. I was the sole investigator, transcriber, and data analyzer for this study. I am a 29-year-old Filipino-American female, and I currently hold a master's degree in psychology. I am pursuing a doctor of psychology degree from Antioch University Seattle from the Clinical Psychology program. All of the participants were aware of my candidacy status towards my doctoral degree, as well as the current study being a requirement for the degree. I have an extensive background in music, having played piano since the age of five, having previous piano-teaching experience, and having played other various instruments currently and in my past. I also have experience teaching music to and playing music with children with ASD, and I have four years of clinical treatment and assessment experience with individuals with ASD. All of the participants asked about what prompted my interest and my pursuing of the topic of exploring music and autism. To adhere to the importance of respect and rapport with participants in grounded theory (Charmaz, 2006), I felt that it was necessary to be transparent about my background, as the participants were willing to do so with me. It is possible that any assumptions or information understood by the participants based on what I shared could have influenced the participants' responses in some way.

Data Analysis

In grounded theory, Strauss and Corbin (1998) explained, "data collection and analysis occur in alternating sequences. Analysis begins with the first interview and observation, which leads to the next interview or observations, followed by more

analysis, more interviews or fieldwork, and so on" (p. 42). They further discussed the challenge, yet necessity, of maintaining both objectivity and sensitivity for the purposes of preventing ones own knowledge and experiences from influencing organic and novel interpretations of a phenomenon (Strauss & Corbin, 1998). Strauss and Corbin also explained that it is impossible for anyone to be completely objective in all of research, but that researchers should be aware of their own subjectivity and manage it in order to decrease its influence on analysis as much as possible. In grounded theory in particular, this means being open and willing to listen, and understanding differences in values, backgrounds, and experiences (Strauss & Corbin, 1998). Particularly for myself as the researcher, I needed to be aware of my own subjectivity due to my experience in working with individuals with ASD, teaching music to children with ASD, and having a music background.

Bias. Regarding bias, Strauss and Corbin (1998) explained, "The important thing is to recognize when either our own or the respondents' biases, assumptions, or beliefs are intruding into the analysis" (p. 97). Further, they suggested:

> We know that we never can be completely free of our biases, for so many are unconscious and part of our cultural inheritances. We find it more helpful to acknowledge that these influence our thinking and then look for ways in which to break through or move beyond them. (p. 99)

Throughout the project, I needed to carefully assess my own biases, note them throughout my data collection process, and bring them to the surface as I analyzed the data. Spontaneous free-write and note taking in a journal was a crucial tool for me throughout data collection and analysis to continuously consider my biases.

Line-by-line coding. Charmaz (2006) described coding as "the bones of your analysis. Theoretical integration will assemble these bones into a working skeleton.

Thus, coding is more than a beginning; it shapes an analytic frame from which you build the analysis" (p. 45). After transcribing my first two interviews, I conducted initial *line-by-line coding* of the data. This allowed me to begin the process of creating categories and decide what data should further be collected (Charmaz, 2006). From this process, I was able to identify emergent themes throughout the data. I continued with *line-by-line coding* for my last two interviews as well.

Focused coding. The second stage of coding was *focused coding*. Charmaz (2006) explained, "Focused coding means using the most significant and/or frequent earlier codes to sift through large amounts of data. *Focused coding* requires decisions about which initial codes make the most analytic sense to categorize your data incisively and completely" (p. 57). This process allowed me to begin organizing my codes from all of my interviews into possible broad categories.

Axial coding. The next process was *axial cod*ing. Charmaz (2006) described, "Axial coding aims to link categories with subcategories, and asks how they are related" (p. 61). During *axial coding*, I parsed out my codes and identified emerging relationships within categories and subcategories.

Theoretical coding. The final step in the coding process was *theoretical coding*, in which I organized and clarified the relationships within the substantive analysis (Charmaz, 2006; Creswell, 2007). From this process, I constructed a final theory that systematically represents successful and positive teaching methods and strategies in music lessons for children with ASD based on the responses of my interviewees.

Memo-writing. Along with and the in-depth data analysis, I proceeded with *memo-writing* as I went through the data and coding processes. Charmaz (2006) stated,

"memo-writing provides a space to become actively engaged in your materials, to develop your ideas, and to fine-tune your subsequent data-gathering" (p. 72). Charmaz (2006) further explained:

> Memo-writing frees you to explore your ideas about your categories. Treat memos as partial, preliminary, and provisional. They are imminently correctable. Just note where you are on firm ground and where you are making conjectures. Then go back to the field to check your conjectures. (p. 84)

Memo-writing was a crucial piece for informing and finalizing my theory. Memos were created from the beginning of the coding process and throughout the construction of my theory. *Memo-writing* provided me with a space to better and systematically develop relationship patterns and themes that emerged from my data. It also helped me to assess which information was pertinent or not for the purposes of the final product of my theory.

Results and Discussion

After completing all four of the interviews, I transcribed them verbatim, utilized the transcriptions as my primary data, and proceeded with the data analysis process to yield my final results. To analyze my data, I proceeded with initial *line-by-line coding* to begin identifying themes, followed by focused coding to create categories, continued by axial coding to create relationships between categories and subcategories, and with *memo-writing* along the way for all of the transcribed interviews to make sense of all of the relationship patterns. From this process I have constructed a theory that represents approaches and strategies that can be used as basic guidelines for teaching music to individuals with ASD. The theory was drawn from the unique experiences shared by all of the participants, and although their experiences were vastly different in many ways, I discovered commonalities to their teaching approaches throughout my analysis that ultimately paved the way for the emergent themes and construction of the theory. Those unique and similar experiences are presented first, below, followed by the theory grounded in those experiences. Some quotes that are provided in this section were slightly edited, mostly for grammar, for the purposes of readability ease and flow. To protect confidentiality and privacy, pseudonyms were used for all of the participants and any students who were discussed.

Unique and Similar Experiences

All participants shared their experiences teaching music to individuals with ASD. Though all of the teachers had their own interesting and individual experiences, commonalities emerged regarding their teaching styles, approaches, and values. Specifically, all of the teachers described their lessons to be opportunities for individuals

with ASD to learn and enjoy music; to be a place where success can be experienced and goals can be accomplished through music; to allow for students with ASD to experience empowerment and positivity through music; as being tailored to individual needs by using specific strategies learned through mainly trial-and-error and personal experiences; and as being non-traditional or having traditional elements with modifications. All of the teachers attributed their success to these elements in teaching music to individuals with ASD.

All of the participants contributed their own unique strategies that have worked well with their students with ASD. For example, Sally described her method of allowing some time for her student with ASD to openly talk, allowing him to express his thoughts before proceeding with the lesson plan to decrease possible distractions during the lesson. Sue discussed her use of a specific curriculum, Simply Music ®, which is a non-traditional teaching method that focuses on playing music by having the students learn motifs, patterns, and improvisation, and by teaching in small chunks rather than teaching a music piece in its entirety all at once. Jane shared and demonstrated her extensive use of a Clavinova ®, which is a high-end digital piano that has the ability to record, save, and replay songs and sounds. It also has various features in addition to the recording function that she continuously uses with her students with ASD, such as keys that light up, which can be used as a visual guide and numerous sounds and instruments from which students can choose. Joe discussed his use of his self-made concrete drum book, which is a visual tool that uses icons of different parts of the drum in place of notes to represent which parts of the drum to play. It is used as a supplement to a book with traditional drum notation for reading drum music.

In regards to her experience teaching a student with ASD over time, Sally shared:

> I actually pretty much fly by the seat of my pants, to be honest, when I'm working with him, because I feel this way with all my students: that music should be enjoyed. It shouldn't be a chore, and so I'm fairly liberal in what I let my students get away with, but I want them to enjoy.

Sally emphasized that the quality of her teaching approach with her student with ASD is based on her student's level of enjoyment. Her flexibility in lessons allows for her student to appreciate music, which then motivates him to engage and learn.

Regarding her thoughts about providing opportunities to learn how to play music to students with ASD, Sue shared:

> I think traditional teachers are willing to give it a try, but give up too soon without just more resources and ways to do it. I mean, not that I think that Simply Music ® is the only way, but definitely if there are adaptations to be made to teach those students, more students can have the opportunity to learn to play piano.

Here we see Sue's philosophy around teaching approaches when working with individuals with ASD. She implied that teachers need to make room for flexibility, be willing to make changes, and tailor their teaching to the needs of their students to allow them to learn.

When discussing her early attempts to teach music to individuals with ASD, Jane shared:

> I started realizing, "Wait a minute, I don't think I've ever been, maybe I'm not as much of a traditional teacher as people thought I was." So I listened and heard clinicians talk about maybe air piano and just kind of playing in the air. I'm like, "I do that all the time. I teach my kids that way." So I started looking at that and that gave me the confidence to try to work with some of these kids that are not invited to come back to other studios.

Here, Jane explained that traditional music teaching would not be effective or helpful for individuals with ASD who want to learn how to play music, and she experienced this

early on when she began working with students with ASD. She realized that she was already making modifications to her lessons as a means to work effectively with her students with ASD, and this is what made her unique from traditional music teachers who tried working with these students.

Joe explained his strategy that he formulated after trial-and-error experiences throughout his time teaching:

> Repetitions of drumbeats, you know, repeat, repeat, repeat, but how do I count up for them in a concrete way? I could display a number thing but I didn't have anything available. I couldn't figure out how to do that, and I had this bucket packed full of drumsticks and I had two buckets. So one day I just had this kid and I'd seen him do things, pissing me off. I was like, "Hey do you think you could play as many beats as I have drumsticks in this bucket?" He's like, "I don't know. I can't even play the beat." I'm like, "Ok, but every time you get through it all the way, I'll throw one stick in that bucket and let's count these sticks," and there were like thirty, now they're sixty. There were thirty sticks in there, so he mucks his way through the beat one time, takes ten seconds to get through it, just like my own personal Skinner box, and he's like, "Hey, I got one in!" He looks back at the box and it's still full, so he plays through again, and pretty soon, by the time we got thirty, he was repeating the beat with stopping.

Joe continued:

> All of a sudden all my students are really happy to come in and if I, a pro drummer, am willing to just sit there and throw sticks in a bucket, they're willing to just sit there and repeat the beat over and over, and they get the satisfaction that comes when it starts to actually become part of them and change the person they are. And so, it's super self-reinforcing, which means teaching autistic kids the last two years has radically changed the way I'm teaching everybody.

Drawn from frustrations with a student who was having difficulty staying motivated with a conventional teaching approach, Joe discovered a non-conventional way to keep his students motivated in the moment when learning new skills in their lessons. This non-traditional approach follows principles of behavior modification by using reinforcement, but in a modified way that is enticing for his students.

The quotes provided above represent the unique and non-traditional approaches that the teachers follow with their students with ASD. These approaches were mostly developed and discovered over time through trial-and-error or by redirecting the focus of their goals for their students and have worked to their advantage. These experiences have molded particular elements that all of the teachers implement in their teaching approaches when working with students with ASD, and these elements are critical to the success of these teachers and their students. These elements ultimately make up the theory that merged.

The Theory

Based on my findings, I have created a theory that represents what has made the music teaching experiences successful for my participants. The overall themes of elements for this success emerged: *music is the goal*, *different levels of success,* and *positivity.* Further, what also became apparent is the utilization of specific *concrete strategies, stylistic strategies,* and *attitudinal strategies* by all of the participants to enable these elements in their teaching successes. Below is a complete formulation of how my particular findings were developed. In Figure 1, I have also provided a visual representation for the formulated theory.

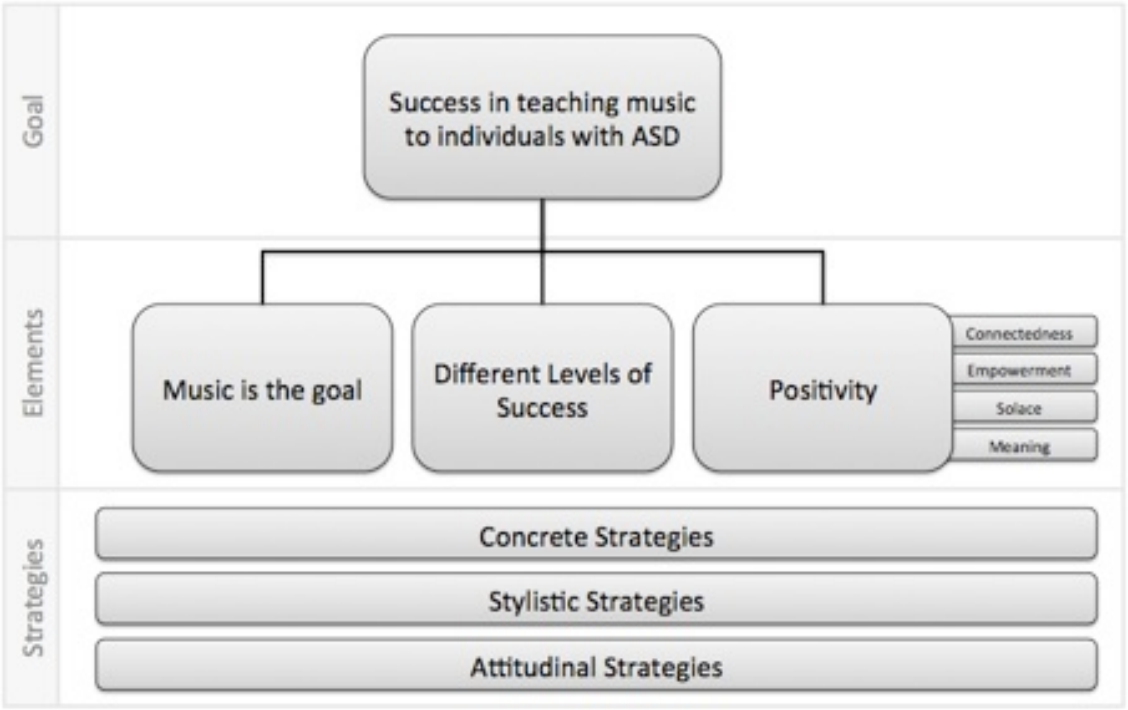

Figure 1. Visual representation of the theory.

Music is the goal. All of the teachers discussed the focus of their music lessons for their students with ASD as being a time to have their students learn skills to play and appreciate music. Their lessons provide a time and space where music can be enjoyed and students can experience a sense of success and accomplishment through playing music. Lessons are also a place where students can feel safe, supported, and relaxed through the structure set up by the teachers and through the relationship and rapport developed between the teachers and their students. The teachers also discussed how parents of children with ASD often pursue lessons because they are showing interest in music, parents want them to have a positive outlet through music, they have tried taking lessons with other traditional teachers and were asked to stop or seek other options, or they know someone or hear about other students having positive experiences with these teachers.

It is important to distinguish the difference between music lessons, which are the focus of this study, and music therapy. The participants are not music therapists, but are music teachers. Music therapy with individuals with ASD typically focuses on treatment of various symptoms, skills deficits, emotion regulation or behavior challenges, but not necessarily for the purposes of learning or improving music skills (Accordino et al., 2007; Boso et al. 2007; Finnigan & Star 2010; Kim et al., 2009). In contrast, the reported goals of the participants were to have their students learn music, build music skills, and develop an appreciation for music. Despite the objectives being different from music therapy, all of the teachers spoke about seeing therapeutic benefits in their students with ASD anyway as secondary outcomes. Areas of improvement included motor skills, emotion regulation skills, social and communication skills, independence skills, and attention skills. As supported in the previously discussed literature, benefits of improving various areas of challenge and deficit often occur from music involvement (Jodi DiPiazza, 2012; Lim, 2010; Ter Bogt et al., 2009; Wan et al., 2010).

Sally explained about her student with ASD showing improvements in motor skills since starting piano lessons:

> And I really think that with any student, and in particular a student that has a learning difficulty or autism or any of that, music makes them feel better. And it also helps with I think motor skills, definitely motor skills, and I noticed this with Tom. In the first year that he took lessons from me, he had a really difficult time putting both hands together. If there was a different rhythm in the bass clef than in the treble, he had trouble, trouble with the treble, and he couldn't use pedals at all, just couldn't. He's still having a difficult time, but I've just really recently reintroduced using the pedal, and he seems to be doing better with it. So, and his mother has, we talk frequently, she has indicated that she feels the same way, that it's definitely helped both his large and small motor control situation.

Sally's explanation represents how when music is the focus in her lessons, music skills can develop, but improvements in other areas can also occur. In the case of Tom, not

only did music make him feel good, but his motor skills also improved, allowing him to play better and keep enjoying music.

> Sue shared about focusing on *music as the goal* with her students:
> So I feel that if they're able to progress along with the program, they are given the opportunities to learn music instead of just playing piano, just reading notes and playing piano. And they actually have music, like really music, blues, and they have chords, and because our goal is to give them a piano playing skill as their lifelong companionship instead of just the ability to play songs. So they have music and then they are exposed to different genres of music, and they're able to really enjoy music instead of just playing piano.

Here we see that Sue believed in giving students with ASD the opportunity to really experience the joy of playing music. She saw it as a long-term benefit because if these individuals have music as a tool to express themselves, they have a positive outlet that they can rely on for the rest of their lives.

Jane shared about one of her students with ASD who showed improvements in various areas from piano lessons:

> So with her, her small muscle control tone was terrible. It just didn't work. It was just flat. We worked a lot on this kind of thing. And so, I started working with her on feeling where notes were, playing notes, hand dropping, one finger, just anything to get this going, and I noticed that as we did that, her behavior was better. She was calmer for like a half an hour.

In this case, Jane highlighted the comprehensive value of music in that she still kept the goal of teaching music, but by approaching it through slowly working on the physical skills needed to eventually play music. Through this approach, as the student's abilities improved, so did her engagement and demeanor in lessons.

Joe shared his approach to focusing on *music as the goal* in his teaching:

> I keep thinking that the difference between me as a drummer now and when I was a little kid and I could play my first beat is just that I can play more sophisticated stuff, but the feeling is exactly the same. So you should never make the students wait for gratification. You know, the whole delayed gratification thing? I think I disagree with it. I think you should always be giving musical experiences every

> lesson or exploiting their own musical experiences so they know that they're valid.

Here we see that Joe's focus on allowing students to explore their own musical experiences has been beneficial. Joe implied that by encouraging and fostering these experiences, students begin to have a positive association with playing music and will want to keep playing more and more.

The quotes shared above represent how all of the teachers focus their lessons on having their students enjoy music and how they often see improvements in their students in various areas of challenge, in addition to gaining musical skills. Focus on music is considered a critical element to successful music teaching with students with ASD because students are able explore and indulge their musical interests and see improvements in their abilities and challenges. When they are given opportunities to do something they enjoy along with seeing improvements and success, they want to keep coming back for more.

Different levels of success. All of the participants discussed the importance of setting attainable and measurable goals for their students with ASD. Goals depend on individual needs, abilities, and levels of functioning. Success is measured by students' satisfaction, parents' satisfaction, or any kind of progress in a particular area. Success is considered quite flexible and variable, as opposed to traditional music teaching where goal markers and expectations are usually the same for every student based on a specific curriculum, timeline, and trajectory. Lesson plans are adapted and modified to allow students to progress and meet smaller successes over time. Sally shared an experience of success for her student with ASD:

> Well I just think the fact that he has made progress, success is really quite a good tool too because the better you get at something, the more you want to do it. A success for him would be completing a tune and having it sound relatively good.

Sue explained her use of one of the Simply Music ® curricula that incorporates stories with learning how to improvise and play songs as a teaching method with one of her students with ASD:

> I have a student who's nine years old, a girl, so I think she's been learning with me for about, I would say about 15 months. She doesn't have good fine motor skills. So I started this program with her thinking that she'll love playing, she'll love the stories, to begin with because the foundation program, the songs, it would take longer for her because of her fine motor skills. So for the basic motif, it breaks down the piano playing into much smaller pieces. So for example, the first lesson is just to play on the black notes, and then the second lesson is just to improvise on a C. So because we teach them to improvise on the whole piano, even just a C, they have 8 C's to play on, in fact it works very well with her. So her mom was saying that, "Oh yeah, she's been doing this for 15 months. It's better than all the time that she's spent with an OT."

Here we see that Sue's modifications to ensure that her student with ASD could accomplish her goals and progress in her skills were beneficial. Her student showed improvements and was able to learn, and her parent was also quite impressed and satisfied with the progress.

Jane described her teaching style with one of her students with ASD and parents being satisfied with her approach, "And yet when they first came in, the parents said with all the therapies in the world, this is the one that glued it all together. This, the music, is the thing that unlocked everything else." Jane also shared about another student with ASD and a parent's response to her non-traditional teaching approach:

> We play three things: Jingle Bells, Twinkle Twinkle Little Star, and We Wish You A Merry Christmas. That's all we've done for a year, and I've told mom, "This is what he focuses on. I try to get him off to one song every time. It usually doesn't work. He wants to play those over and over." She goes, "I don't care. He comes home, he's happy, he's calmer. I don't care what you're doing. It's all working."

Jane indicated that when both students and parents were satisfied with the level of progress, even if it was extremely slow, this was an indicator of success. In the cases of her students, parents observing day-to-day improvements outside of or in addition to the musical skills of their children were signs of progress.

Joe shared how he begins lessons with all of his students and has them experience success from the beginning:

> And then I'd take my hands away and they'd hit the drum and the high hat and out would come a beat. The parents would melt. It's like, sold, I'd have a new student. And then if it was fast enough, regardless, if they could keep it going, I'd go sit on my other drum set and start playing with them. And if we could keep it going, I'd turn on Taio Cruz's "Dynamite," you know that song? We play "Dynamite." It's just amazing to see the kids light up playing their first song in their first drum lesson.

By allowing brand new students to hear themselves and allowing their parents to hear them play an actual song in the first lesson, they were all instantly excited and motivated to continue.

The above quotes represent how all of the teachers ensure that their students experience success in various ways by understanding each student's strengths and challenges, but really centering on their strengths and interests to draw them in and keep them interested. Capitalizing on strengths and interests of the student requires a deeper understanding of the student and an ability to be patient and flexible throughout lessons. As observed and discussed by the participants, this type of approach to teaching contributes to the student's enjoyment, trust, and motivation to continue and regularly attend music lessons.

Positivity. All of the teachers expressed how the power of music allows for their students with ASD to experience *positivity* by having a sense of *connectedness, empowerment, solace,* and having *something meaningful* in their lives. The teachers

highlighted the importance of tailoring their lessons to be as enriching as possible for their students with ASD. The element of *positivity* is similar to what was previously described by Bogt et al. (2009), in their discussion about the woman with ASD who was severely low-functioning, non-verbal, and had difficulty with social interactions. Through playing piano, she demonstrated complex musical ability and creativity and communicative engagement. This concept was also demonstrated when Jodi DiPiazza (2012) found joy through playing music despite her ongoing struggles with autism. Sally explained her feelings about how music can positively impact individuals and giving them a sense of *solace*:

> I think there's something about music I can not really describe, that helps you to focus more, and if you like music, if you enjoy the results of playing and listening to music, I think it releases endorphins in your body that make you feel good about things, and so you want to do it more.

She continued, "I really feel strongly about the healing agent part of music, and it just like, you know, really soothes the wild beast in all of us." Sally emphasized that music can be a conduit for positive feelings, not just for individuals with ASD, but for anyone who enjoys music. This is especially important for her student with ASD because he feels good when he plays music, which motivates him to keep playing music and to keep learning from her.

When looking into programs that would work well for individuals with ASD before she began teaching, Sue described an individual she had previously worked with who was *empowered* through music, specifically from learning with the Simply Music ® method:

> I have a friend who lives in California. She has a son who has autism who is now sixteen years old. So we used to go to the same church. I used to live in California. I taught the son Sunday school. At that time he was five or six years

> old. I was just chatting with her casually. I said, "Oh, I was hoping to find some piano program that may work with Jim," and then she sent me a clip of her son at his first piano party or recital. Her son was playing a song, which is the first song in our foundation one book, which is "Dreams Come True." So he was actually playing and singing by himself. I was actually driven to tears because I know how he rarely spoke when I taught him Sunday school. His mom or dad was always sitting with him.

Sue continued to discuss the benefits of learning songs to which students can sing along:

> It just gives them a channel to express themselves, like the songs that I mentioned in the first two lessons. Most of them have very limited speech, and yet they can sing and there is a sense of joy to be able to see themselves do that.

Here we see that Sue values how music can positively change an individual's life. She inferred that music teachers must have this type of outlook when working with individuals with ASD in order to make progress in lessons.

Based on her own teaching experience, Jane described how music can impact individuals with ASD deeply and emotionally when often times these individuals are otherwise closed-off:

> Yes, you're going to get into music therapy, you're going to get into teaching them how to play the piano, but to get into their soul and to just help bring out whatever it is. I liken it to you have a house and every window is bolted shut. You're not going to get in there, but in the very very back, there's an attic door that's wide open. You get in there and you work your way through with these kids and you help them to open all the doors. So that's what I look at as my job, is to help them widen their world.

Jane continued, dovetailing from this metaphor:

> What I learned was there is no book on this yet, on how to teach these kids, and I'm not sure that would even work. I think that gives you an idea. So I am writing on this. What I found was a lot of listening, a lot of modeling, a lot of, once again, it's not just an autistic child, but it's what is their personality and how do you quickly get into their open spaces because so much of it is going to be shut.

Here we see Jane's emphasis on exploring and guiding students to find *something meaningful* in their lives through music. This entails *connecting* with the student, not

only on a surface teaching level, but also on a personal level. Jane implied that music teachers working with individuals with ASD would need to feel comfortable and be willing to make these types of connections with their students in order to make progress. Jane further implied that in her experience, having this level of understanding of her students not only increases their motivation to learn, but also her ability to teach them. Furthermore Jane explained the importance of empowerment through her music teaching approaches and utilizing the playback function on the Clavinova ®:

> So what I learned from her early on and continued for the next 8 years was that if you can instantly, within the first lesson or so, have a child feel like they're worth something through liking them, whether you know them or not, having just a calm presence and then showing them something that they can do it themselves and hear even five notes on the piano that they played and they can hear back, they think they're awesome and you've opened that door. So once you've opened that door, you can start to build that trust, but if the traditional way of teaching, if it's, "sit down, let's do these, here's your assignments, here's your scales, sit up straight, do this," you're going to lose them in half a second.

This is an example of how Jane creates opportunities for her students to associate playing music as a positive experience. By doing so, learning and seeing progress becomes more feasible and motivating for her students.

When describing how he utilizes music that his students enjoy for *empowerment*, Joe explained:

> You know, I always try to play to the obsessions, and maybe they just play a beat that they play on their drums at home. And so they come in and then they play it on the drums here and we'll take a whole lesson and just do a duet, you know, and improve duet building off that one beat. And they leave sweating and on cloud 9 after something like that. So I try to pick up on things like if we're transitioning from one thing to another, and they play something kind of cool on the drums.

Here, Joe highlighted how he *connects* with his students on a personal level by exploring how they enjoy music and implementing that into his lessons. By giving them opportunities to succeed at something they choose and enjoy, Joe has seen his students

become more eager to play, are excited to keep learning more, and are wanting to keep improving through this sense of *empowerment.*

The above quotes demonstrate how all of the teachers attribute music to evoking *positivity* in responses and engagement in their students with ASD, which then makes them feel empowered and confident in themselves. This is important because these feelings can be few and far between for many individuals with ASD due to the day-to-day struggles that they might deal with because of their challenges. There is a high prevalence of depression in individuals with ASD, likely rooted from self-criticism with one's challenges, and some individuals become aggressive or turn to substance abuse as outlets (Attwood, 1998). All of the teachers stressed that music can be used as a positive outlet and tool if individuals with ASD are encouraged and given the opportunities to engage with music in this way.

Strategies

All of the participants described particular methods that they use when they work with their students with ASD. They explained that many of their strategies were established through trial-and-error in their own experiences over time because there currently are no manuals or specific instructions readily available for how to teach music to individuals with ASD. They explained that many of their strategies were often results of trying to figure out how to work with their students with ASD because traditional methods or other approaches did not work well for them in the past. Sue, Jane, and Joe shared that they have their own children with ASD and that some of their strategies were drawn from their own personal experiences working with their children and from various therapies and specialists they have worked with as well. All of the teachers discussed

having a desire to learn more information and strategies regarding how to continue to work better with children with ASD and to be able to collaborate or learn from other specialists who are knowledgeable and highly trained in ASD.

The teachers explained how their teaching approaches differ from traditional music teaching in that traditional teachers often focus on following a specific curriculum and expect students to reach milestones over a particular period of time. Another component that the participants have found helpful is building trust and rapport with their students. Also, many teachers have challenges with managing difficult behaviors, and students with behavior problems are often referred out to other teachers or are asked to stop lessons all together because of this. All of the teachers spoke about regular and intensive parent involvement as a means to understand what works best for their students, to track progress, and to have parents help their children when needed. Sally and Jane discussed having frequent communication with parents about what they are working on with their students, discussing challenges and updates regarding the students, and reviewing any back and forth feedback that would be pertinent to the lessons. Sue and Joe shared that parents are expected to attend lessons. For Sue, parent participation is to ensure that students are following lesson and practice plans at home. For Joe, parent participation is important for receiving immediate feedback from parents and to also have parents observe the successes of their children. The participants shared that these are reasons why many of their students with ASD have struggled in traditional music lessons before, as these components and adaptations are not typically utilized. They explained various types of strategies that have contributed to progress, success, and positive

outcomes in their lessons with students with ASD. Specifically, *concrete strategies, stylistic strategies,* and *attitudinal strategies* emerged from the data analysis process.

Concrete strategies. *Concrete strategies* are specific tools that are added to the lessons in order to help students grasp and better understand learned concepts and to stay on track during lessons. These types of strategies are similar to what were described by the authors of the previously discussed literature about teaching music to individuals with ASD in the classroom, such as utilizing visual aids, writing visible detailed schedules, following regular routines, using clear and direct communication, and utilizing behavior management techniques (Adamek & Darrow, 2007; Clements-Cortes, 2012; Hagedorn, 2004; Hourigan & Hourigan, 2009; Iseminger, 2009; Nelson, 2012; Price, 2010).

Sally shared *concrete strategies* that work well for her student with ASD:

> And it's something he can do on his own too. So that's why he doesn't want or ask for help at home. I do write out rather detailed instructions for him so he can refer to that and because he follows instructions quite well. Spoken instruction doesn't work as well as when I write it.

Sally further explained:

> It's helpful, I think for almost everyone to have a set schedule and routine that you do. You know you're going to do this, you know you're going to do that, and rather than have a lot of surprises and see what you've prepared for.

In this case, Sally's utilization of writing specific instructions and having a consistent schedule helps her student stay on track and regulated during their lessons. He knows what he needs to do based on what is written down for him, and he knows what to expect because a schedule is set. These tools often work well for individuals with ASD because it provides them with structure and support as discussed in the previous literature.

Sue described her use of *concrete strategies*:

> I also, with every student typical or special needs, but especially important for special needs, I write out the lesson agenda on the whiteboard. I learned that from working with my son. He's a really visual learner. He likes to have all, everything, the agenda planned out. So I'll actually use a marker for special needs students. Like after they finish a task, I check off, check off, check off.

Sue further explained, "I feel that the immediate reward works very well. And then of course, knowing that with the speech challenge, I tend to be very direct and make my sentences very short and direct." Here we see that Sue's use of a visual schedule has been beneficial for her students with ASD because not only does it visually represent a list of what to expect, but it is also used a motivational tool. Her students can experience the satisfaction of confirming that they completed a task or skill by seeing the check mark next to it. Also, her use of clear and direct speech decreases ambiguity and confusion for her students with ASD.

Jane specifically explained how she uses her Clavinova ® as a *concrete strategy*:

> And so I said, "You know, you could record yourself", and all of a sudden she's like, "What? Where's the record button?" So she talked a sentence. So I showed her, so she recorded what she does, and on these pianos, there's a light feature so she could hit the guide and whatever she played, she could play again. And all of a sudden, smile on her face, and she says, "That's great!" So what it was, it was verbal feedback and it was self-empowering.

Jane further explained:

> Part of it is, and we're working on this for this year, but you really need to have a Clavinova ®. You can't have just another digital piano. That guide feature is so essential because if I can't get them to do anything else, I can get them to hand-eye coordinate and play a note because it's there really simply.

Jane explained that the many features of the Clavinova ® actually fit well with meeting the needs of students with ASD. The visual dependence is available through the guide feature and the feedback dependence is available through the record and playback feature. Though not necessarily designed to tailor to the needs of individuals with ASD,

Jane emphasized the many advantages of utilizing the Clavinova ® because of its vast features.

Joe shared the use of his concrete drum book as a *concrete strategy*, particularly as a visual tool:

> And then I was like, "Why don't I do something more concrete?" So I went into Flash, Adobe Flash ®, which was the only graphics application I knew, and I drew high hats, snare drums, and bass drum pedals, and then I lined them up like music. And then I showed it to her and she was like, "What is this?" because the snare drum was at the side view and my students always see from the top view. So she drew what the snare drum should look like and I went back and changed it and instantly she was reading music and learning drumbeats.

Joe also shared regarding communication modifications:

> And there are other things I've found like stop saying, "You played your bass drum on the wrong note on the wrong count," "Your snare drum was on the wrong place," or you know, "Your bass drum and snare drum or your high hat and snare drum switched roles. They reversed roles." You know, things like that. I do observations now, "The first eight or so times you played this. What you played matched what was written here exactly, and the last two times you accidentally switched this or played too many times", something like that. "Your foot accidentally started doing this or that," and it's had a tremendous impact on everybody.

Here we see that Joe created a tool based on the difficulties he had with a student who was having challenges with a traditional approach to learning music. Joe focused on the visual needs of the student and created the concrete drum book, which then ultimately became a main tool for all of his students. He also changed the way he communicated by focusing on the process of what is happening in the moment rather than focusing on what the student is doing wrong. It is common for individuals with ASD to feel triggered by what they might perceive as criticism (Attwood, 1998).

The above quotes represent how all of the teachers utilize *concrete strategies* as a means to assist students with ASD to learn, follow tasks, stay focused and motivated, and

to be given opportunities to demonstrate their best work in the lessons. These strategies have become regular practices and tools for the participants through learning and understanding what would work well for their students with ASD. The discovery of strategies often occurred through trial-and-error experiences in their early work with individuals with ASD. However, over time, they would find what worked best for their students and continue utilizing those tools with more students as they found success in their uses and/or made modifications to those tools when needed.

Stylistic strategies. The teachers also described their use of *stylistic strategies* to make their lessons work for their students with ASD. *Stylistic strate*gies are changes or modifications that are made to lesson plans in order to tailor to different learning styles and needs of students. This allows for students to progress in skills and demonstrate their best work. Stylistic changes can also help enhance the enjoyment experience of the students by highlighting their likes and interests within the lessons. These strategies were similarly described by the authors in the previous literature discussed such as having various levels of expectations for students based on their needs, making changes and adaptations to the curriculum where appropriate, being flexible when needed, and creating a relaxed environment (Adamer, 2001; Clements-Cortes, 2012; Hourigan & Hourigan, 2009; Nelson, 2012; Price, 2010). In regards to her stylistic approach, Sally shared:

> Well, first of all, I think he likes music, and I was encouraged by the idea that he has chosen certain things that he wants to learn rather than me assigning something. And so that shows that he's interested in it. It's not just something that his parents are making him do because they think it's good for him.

Here we see that Sally has made modifications to her teaching with her student with ASD by allowing him to choose what he wants to learn how to play when she might typically

assign music to other students. This modification keeps him interested and motivated to play.

Regarding the use of a non-traditional curriculum, Sue explained:

> So it's playing based, so we just make use of different senses. So that's why Simply Music ® also calls itself a very multi-sensory approach because we use visual, we use hearing, we use playing, like tactile. We play directly. So that's why I feel like it works very well with special needs students, because they don't rely on just one input, which is reading, to be able to play.

Particularly, Sue explained that the Simply Music ® approach utilizes the lesson book showing motifs to follow as a visual guide, listening to a CD at home as an auditory guide, and a direct focus on finger and hand movements and placements as a tactile guide.

When discussing the need to make stylistic teaching changes to her teaching approach, Jane explained:

> You find some of the most original amazing musicians if you don't teach them in the box. And so, to be able to show them playing original compositions that are amazing who did not learn the traditional way, it brings more validation to this whole process.

Specifically, Jane discussed how she allows students to freely play and compose their own music, which in turn allows for her students to really showcase their musical abilities. In the quote above, she specifically described one of her students with ASD who has composed a breadth of his own music and has been nationally recognized and awarded for his compositions. Jane further shared:

> To me that's the fascinating work, is what you can do in a totally out of the box way that could help in a physical real sense. Just being aware of thinking about something a little bit differently, just because you're so focused on how does music heal. So to me, it's an unending toy box to play in, and to see what can apply. And I just think there is really a huge work that can be done with this.

Here we see that Jane's approach to teaching is more experimental than set in stone. Because she has approached teaching in this way, she has had the freedom to explore musical gifts and talents by allowing students to access their own musical desires.

Regarding his stylistic teaching approach, Joe explained:

> I don't say practice, I say come and improve, and if they want to practice, they can. I usually tell them, "Make stuff up at home. Play on your drums. Pretend you're a rock star," and then they just keep steadily improving.

Joe discussed that this approach keeps his students interested and motivated compared to the decrease in engagement and interest he has seen in students in the past who were assigned and badgered to practice. Joe continued to discuss the importance of parent involvement in the teaching process and the retention of his students:

> I definitely want the parents at the lessons, because if the parents see the kid as improving, parents keep paying for lessons, the kid keeps improving. So all my typical and atypical kids, almost always the parents are there, and I think it's a high point of the parents' week, watching their kids improve at something.

Here, Joe explained that parent involvement helps him figure out if his approaches to teaching are working well and that he can bounce off ideas from parents to make adjustments when need be.

The above quotes represent how with experience and time, the participants have evolved their teaching styles and approaches to best meet the needs of their students with ASD for the purposes of their students to experience success and progression through playing music. Previous traditional teaching styles often did not provide opportunities for success for many of these students, therefore *stylistic strategies* have been essential. As music teachers become more willing to make modifications and accommodations for students with ASD, the more likely they will see progress and improvements in their students. Having a plan for modifications and accommodations for individuals with

ASD based on individual needs has become necessary and required in many schools, and when implemented appropriately and thoughtfully, they have been extremely helpful for teachers and the students (Attwood, 1998). Music teachers may find benefits to following a similar approach.

Attitudinal strategies. All of the participants discussed how their attitudes towards teaching students with ASD have made positive impacts on the success of their teaching experiences. *Attitudinal strategies* refers to reflecting on one's own values and beliefs about the learning potentials of individuals with ASD and making changes within one's own self to support these individuals. This might even mean the need to change previous approaches and styles of teaching. *Attitudinal strategies* are similarly discussed by authors of the previously described literature for teaching music to students with ASD such as being open to varying one's expectations, becoming familiar and knowledgeable of the student's strengths, challenges, and needs by accessing and working closely with outside resources who are connected to the student (parents, other teachers, therapists, etc.), understanding that one needs to take time and utilize a great deal of energy to create lesson plans that will be useful and meaningful, being considerate about sensitivities that a student might have, and overall being knowledgeable of ASD (Adamer, 2001; Clements-Cortes, 2012; Hammel, 2001; Hourigan & Hourigan, 2009; Iseminger, 2009; Price, 2010).

Regarding how her attitude is a factor in her teaching, Sally shared:

> I would say the biggest tool that I have at my disposal is patience. I think flexibility too. Flexibility and patience; I feel like if I didn't have those and I needed to keep him on task totally, it wouldn't work for either one of us. So I would say we have a pretty good relationship.

Sally continued to share:

> Treat each individual as an individual. Don't have any expectations about what they can or can't do, and use as much patience as possible, and tenacity. And keep positive. And a lot of praise for when they do right. I'm not going to praise him if he's doing something awful, but if he does it correctly, I think praise is a real good tool. Makes him want to do it more.

Sally further explained:

> I think intuition is really huge too, plays a great role in how you deal with people and knowing kind of instinctively how you're going to teach a certain individual by observing and seeing what their learning process is and all that.

Here, Sally emphasized the importance of positively connecting with students to understand what will work best for their learning and progression. She also discussed that teachers need to be patient and understanding to work well with students with ASD. She acknowledged instinct as a factor that has guided her to explore what works best with her student with ASD. This may be different from traditional teaching, where the agenda is typically to follow a set lesson plan and teach a specific way with not much room for variance. In that kind of approach, instinct may not necessarily be imperative. Instinct, in this case, directs the way Sally teaches based on what will work best for her student, rather than a strict agenda directing how the lessons will go.

When explaining the importance of attitude for teachers working with students with ASD, Sue shared:

> Yeah, I feel that, and I'm hoping that most teachers who come into teaching kids on the spectrum have a conviction that they can learn, they just learn differently. And then developmentally, they're a little different so things may happen later, doesn't mean that it will never happen. So just have patience, just do not give up so easily.

Sue recognized that having a particular outlook on how to teach students with ASD could impact how the lessons will go. She implied that if the belief of the teacher is that students with ASD have the potential to learn just like any other student, but may just

need to be supported or taught with a different approach, then likely that teacher will be able to teach them successfully.

Regarding how one's attitude can impact students with ASD, Jane explained:

> I would say, first of all, get to know kids with autism. Don't get to know just the clinical study of autism. It is still a person who is, you could say, caught in a maze, and you are able to help assist them to take down those walls. So if you think about it in that way, that there's a person that's got great gifts there, they aren't just a disabled person of some sort. The second is don't ever think that you can teach it from a handbook, but you are going to have to practice intuition to make that one of your biggest strengths.

Furthermore, Jane explained the importance of being attuned to what the students might need:

> And just to be a calm presence and let them come in knowing that every transition is hard. So if you do that, you will have such fun. It's going to be hard, you're going to learn such patience. You learn to truly think out of the box, but you're going to become so intuitive, and so your life skills become incredible. And everything that you teach these kids, where you have to break it down, and do it a different way, then when you are teaching typical kids, it's amazing. I mean, you could teach with your eyes closed.

Here we see that Jane also recognized intuition as a key to understanding students with ASD and learning what types of teaching approaches will work best for them. She infers that intuition allows for teachers to make that more personal connection with students and explore how their musical gifts and desires can be maximized. Jane implied that by allowing one's self to connect with students with ASD on this level, while at the same time having an open mind and being flexible about expectations, one will likely see progress and improvements in their students.

Joe shared the importance of connecting with outside resources to gain more knowledge to understand and work better with students with ASD:

> If they have an autistic student, chances are very high that those students have physical therapists, occupational therapists, speech therapists, and I highly

> recommend if they want to teach kids with autism that they go for free and watch how those people teach and those people are really, really willing to teach you.

Here, Joe described the importance of teachers being willing and open to consult with other specialists who know the child well or understand what will work well for the child. For example, he discussed a tool that he adopted from observing a vision therapy session that he now regularly uses in his lessons. He indicated that his eagerness to learn from others has helped him become successful in teaching individuals with ASD.

The above quotes represent how all of the teachers value attitude and willingness to be progressive in order to connect with and really impact their students with ASD to enjoy and succeed in music. All of the teachers inferred that making connections with their students is essential to their teaching success. Without making a personal connection in some way, it will be difficult to identify what will or will not work well for students with ASD. An emphasis on intuition was discussed as an aspect to making connections with students. Teachers are encouraged to recognize their intuition to help them navigate strategies that will work best for their students.

Guidelines of Theory

Overall, what emerged from the participants is that *concrete strategies, stylistic strategies,* and *attitudinal strategies* are crucial for music teachers to focus on *music being the goal* for students with ASD, allowing for students with ASD to experience *different levels of success* through music, and impacting students with ASD by evoking *positivity* through music. According to all of the participants, these elements are ultimately what make their music teaching approaches with students with ASD successful. These elements are also supported by the literature that was previously discussed As a result of my data analysis process, I have constructed a model of these

strategies. Below is an outline of general concrete, stylistic, and attitudinal strategies that are recommended and may be utilized as basic guidelines for music teachers who are interested in teaching individuals with ASD.

Concrete strategies:

- Follow a regular and predictable routine.

-Write schedules/instructions/expectation where it is easily visible.

-Communicate clearly and give direct instructions.

-Utilize visual aids such as pictures, images, or other types of visual stimuli.

-Use behavior management tools such as reward systems, immediate praise, and feedback for desired behaviors to make goals and expectations clearer and motivating.

Stylistic strategies:

-Veer away from teaching strict traditional methods and move towards non-traditional methods.

-Modify traditional methods by utilizing traditional curricula but adapting them to meet the needs of the student.

-Make lessons less strict and more flexible, but still establish clear boundaries and expectations.

-Utilize music that will appeal to the students.

Attitudinal Strategies:

-Practice patience and expect slow and steady progress because of learning differences

-Take the time to understand students' strengths and challenges to be able to adapt lessons based on their needs.

-Be willing to work on establishing relationships and building trust and rapport with students so that students experience music lessons as positive and enjoyable.

-Be intuitive and attuned to when and how to make adjustments in teaching.

-Understand that individuals with ASD are teachable, even though their learning styles might be different from others.

-Have active and constant involvement and communication with parents who know the child best.

-Have a calm, consistent, and predictable presence.

-Take the time to consult with not only parents, but also teachers or other specialists who work with the students.

-Take the time to get educated about ASD by doing research, consulting with ASD specialists, or attending classes or workshops.

It is important to acknowledge that as discussed by some of the participants in this study and in the previous literature, it is difficult to create and to follow a precise guide for teaching individuals with ASD. This is due to the variability in skills, functioning, needs, abilities, and personalities of these individuals. This is also perhaps why there is currently no handbook or thorough research in this field of study. With these considerations, music teachers and ASD communities are encouraged to use these guidelines as more of a base to grow from in their teaching approaches, rather than an instruction manual to follow step-by-step. These guidelines provide what music teachers should be mindful of when preparing to work with students with ASD. After going

through the guidelines, teachers should then tailor their teaching approaches to what the needs of the students are based on the considerations listed in the guidelines and what they learn about the students. For example, under *concrete strategies*, the suggestion is to utilize visual aids such as pictures, images, or other types of visual stimuli, but I do not specify what types of pictures, images or visual stimuli should be used. This is because it depends on what teachers find to work best for the student and their teaching approaches. However, with the guidelines, teachers will now know to take this factor of utilizing some type of visual tool into consideration. All of the participants identified their own visual tools that they use, but they are all different from one another: Sally writes down instructions, Sue utilizes a visual schedule board, Jane uses her Clavinova ® guide feature, Joe uses his concrete drum book.

Summary and Concluding Discussion

The purpose of this study was to explore how music teachers who have experience working with individuals with ASD successfully and productively teach these individuals, to distinguish if any particular modifications and adaptations are made in their lessons to better teach these students, and to identify if any strategies or specific methods have been most helpful in their teaching. These purposes are critical because empirical literature and support is limited regarding approaches for teaching music to individuals with ASD, which limits opportunities and prospects for individuals with ASD who may be interested in music. Teachers with no prior knowledge or training in ASD or experience with individuals with ASD may become overwhelmed and not expect the social, communication, sensory, attention, executive functioning, and self-regulation challenges that may present themselves in lessons if they have a student with ASD. Improper handling of these challenges can lead to conflicts between teachers and students, students not being motivated to attend to tasks or even go to lessons, students' strengths being overlooked or blocked by their challenges, lack of productivity and progress, and limited opportunity to enjoy music. Such outcomes can then affect the student's self-confidence and perspective about his or her own abilities. The participants in the study explained that many of their students came from these types of experiences. Therefore, if music teachers are wanting and willing to teach individuals with ASD, it is necessary for them to be adaptable, understanding, and somewhat knowledgeable about not only ASD, but the individual. This conclusion is supported in both the literature discussed in the literature review section and in the results of the current study.

My findings indicate that although all of the participants had different styles of teaching, overall, they were unanimous in their strategic and value-driven principles within their teaching approaches. These principles include connecting with the students on a personal level to understand their strengths and challenges, and making modifications and accommodations to the lessons based on this understanding. These principles have been the crux of why these teachers have been able to successfully teach music to their students with ASD. As discussed in the results, success was measured by student retention, satisfaction of students and parents, and varying levels of progress. All of the teachers had these strategies in common based on their discussions about their teaching experiences. With my findings, the theory that I have formulated and support is that there are important elements that can help music teachers work better and/or work well with students with ASD in their lessons. These elements include not only focusing on students developing musical skills and abilities, but also on giving students opportunities to enjoy playing and appreciate music (*music is the goal*); focusing on creating opportunities for students to experience success at varying levels because of differing abilities and functioning (*different levels of success*); and focusing on creating a setting where music can make students feel empowered and confident about themselves (*positivity*). In addition, there are specific strategies that can help teachers ensure application of these elements. These include: utilizing *concrete strategies* (specific tools to make modifications or accommodations where needed), *stylistic strategies* (flexibility in teaching approaches), and *attitudinal strategies* (willingness to better understand the student and work with what works best for him or her). It is important to note that all of the participants discussed that although many of these principles emerged from working

with their students with ASD or students other special needs over time, these strategies have influenced and changed the way they teach all of their students overall. They have found that these principles work well with all of their students, and they continue to teach in this way to benefit all of their students.

Although therapy was not the primary intent or goal of the participants in their music lessons with their students with ASD, it is relevant to note that elements that are often followed and utilized in clinical settings were described and implied as being essential for teaching students with ASD. These components include: establishing a relationship through building trust and rapport with the student, understanding the student's strengths and challenges, working in collaboration with other specialists that work with the student, and regular involvement and communication with the student's parents (Schroeder & Gordon, 2002). The participants also highlighted suggestions that are often recommended in classrooms to teachers in general who might work with students with ASD. These similar suggestions include: having a calm and predictable disposition, following regular routines and schedules, making adaptations and modifications where needed, and encouraging ways that the student can exhibit his or her best work despite his or her deficits (Attwood, 1998). As was discussed by some of the participants, it is likely to be valuable for music teachers working with individuals with ASD to collaborate and consult with other ASD specialists and people who work with the individual with ASD such as teachers or therapists because of their experiences and knowledge utilizing the elements that work well with individuals with ASD.

In the current literature regarding teaching music to individuals with ASD, a majority of the anecdotal and thought pieces came from teachers who have taught in

classroom settings. Though other studies have similarly provided general guidelines and strategies that music teachers can try with their students with ASD, this study is the first of its kind to utilize a grounded theory method and yield empirical results to support specific approaches for teaching music to individuals with ASD. Despite the differences in methods and approaches, this study generally supports most of the literature discussed in the literature review sections. For example, Hammel (2001) discussed that teachers who have worked with students with special needs believe that prior to working with these students, teachers should grasp and meet specific competencies to work effectively with these students. The competencies gravitate around teachers rooting themselves in understanding the strengths, challenges, and needs of their students and having the ability and openness to make changes and accommodations to meet these needs. Furthermore, Darretxe and Sepulveda (2011) emphasized the importance of teachers being educated about ASD, understanding specific challenges of their students with ASD, and structuring their teaching approaches and lesson plans based on this knowledge as a means to teach these students effectively. The findings and suggestions from these authors align with the findings from this study, particularly around music teachers utilizing the concrete, stylistic, and attitudinal strategies to understand their students with ASD in order to work with them effectively. This current study provides initial groundwork around successful approaches and effective practices in music teaching for music teachers who are specifically seeking to offer private music lessons to individuals with ASD. Although the findings from the current study do align with and support the current literature, there is an apparent gap in the literature for empirical support around teaching music to individuals

with ASD. The empirical findings from this study set a foundation of knowledge and awareness to begin filling this gap.

There are also some limitations to note for this study. Although using a grounded theory approach was appropriate and feasible, it was possible to gather and analyze even more data with this approach. Although from my standpoint, I reached saturation with my fourth participant, it is possible that if I interviewed more participants, further analysis could have been conducted and more information may have emerged. However, I chose to focus on just the four participants that I interviewed and felt safe to do so due to reaching saturation in my data analysis. Due to the qualitative nature of this study, readers should be advised to determine whether or not the findings would be applicable to their own practices. Regardless, this study and my findings can and should be further investigated. It would be interesting to gather more data and responses from additional music teachers who work with ASD to assess if the current findings are supported or if further analysis should be conducted.

Some of the teachers in this study discussed their views about individuals with extensive experience working with individuals with ASD likely being the most effective in teaching music to individuals with ASD. This implies that it may still be difficult for a music teacher with no prior experience of ASD to teach individuals with ASD, even if he or she follows the guidelines from this study. However, the one participant in this study with limited personal and teaching experience working with individuals with ASD still shared responses that were similar to the participants with extensive personal and teaching experience with ASD. Although she only has one student with ASD, she has experienced success with him. Some possibilities to consider regarding why these

teachers with vastly different experiences still shared commonalities and have success in working with individuals with ASD are their foundational principles in their teaching approaches. It would be useful to further explore these implications and assess differences between music teachers with limited experience with ASD and music teachers with extensive experience with ASD who follow the suggested guidelines from this study.

Another consideration to note is my background in music and working with individuals with ASD inevitably imposing my bias in this study. Although I was mindful and noted my bias throughout the study, it was impossible to completely remove bias from influencing the data analysis process. Despite my experience, I was especially surprised by the heavy emphasis of *attitudinal strategies* that emerged from the responses of all of the participants. When constructing this study, my expectations were that I would perhaps gain more knowledge about *concrete strategies* that work well for my participants, but I did not necessarily expect a strong focus on particular characteristics, attitudes, and values that would be commonly shared among the participants. It would be interesting to see this study replicated or further investigated by someone who does not have background in music or ASD to see if similar results are yielded.

Also, during my literature review process, empirical research around teaching music to individuals with ASD was extremely limited, and I did not come across any quantitative research for this area of study. Now that I have provided foundational information and a systematic theory for this area of study, it possible that this theory can further be explored using quantitative approaches. For further support in the research

field, it would be imperative for this theory to be further investigated using empirical methods.

In conclusion, this study provides a landscape of possibilities for further exploration, and I have provided the systematic pieces that can be fostered in continued research. In the meantime, my findings can be utilized as a preliminary tool for music teachers who are seeking more knowledge and information about how to effectively teach individuals with ASD. The more music teachers are educated and knowledgeable about ASD and how to work with individuals with ASD, the more individuals with ASD will have access to opportunities where they potentially can cultivate their interest in music, feel empowered, and ultimately feel good about themselves. It will take more than just teaching these individuals how to play an instrument. It will take a shift or even a complete turnaround in teaching approaches, and it will be crucial for music teachers to know this from the beginning before taking on students with ASD. If further research is conducted in this area of study, potential workshops, classes, or materials can possibly be developed to support teachers who are willing to gain this extra knowledge and training and learn to access aspects of themselves that they might not normally do in their teaching such as following intuition or connecting with students on a more personal level. Overall, this study can be a resource for music teachers and ASD communities and can be used to spread awareness about the need for even more resources to support music education for individuals with ASD.

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Appendix A

Initial Contact E-mail

Hi _____,

My name is Samantha and I am a doctoral student in the clinical psychology program at Antioch University. I am currently conducting a study for my dissertation, titled "An Exploration of Teaching Music to Children with Autism Spectrum Disorder". I was wondering if you would be open to being interviewed by me about your experience working with individuals with ASD as a music teacher. I have attached my form for informed consent to this email, which has more details about the study and the process if you are interested. Your time and participation would be immensely appreciated.

Please let me know if you have any questions or concerns. Feel free to email me or call me (206-931-4728).

Sincerely,

Samantha Jimenez

Appendix B

Informed Consent Form

Informed Consent Form

Title of study:
An Exploration of Teaching Music to Children with Autism Spectrum Disorder

Principal investigator: Samantha Jimenez, MA, LMHCA

Institute: Antioch University Seattle

Purpose of this research study

Purpose of the dissertation study is to:

- Explore various teaching styles, methods, curricula, modifications, accommodations, or tools that music teachers use when working with individuals with autism spectrum disorder (ASD)
- Identify how individuals with ASD can receive optimal music education
- Identify a teaching framework for music teachers who are interested in teaching individuals with ASD.

Procedures

The study will involve a semi-structured interview in which I will be inquiring about your experience working with and teaching individuals with ASD. The interview process will likely take 1-2 hours of your time. The interview will be audio recorded. Content of the interview will be transcribed verbatim and analysed.

Possible risks or benefits

The only anticipated risks to you might be feelings of irritability and/or frustration due to needing to set aside time to participate in the study; the possibility of activating negative feelings or emotional experiences if you share or recount difficult experiences, interactions, or encounters; or due to the relatively small-sized, tight-knit ASD community, the possibility of you or others who are described by you being identified from the study by those within the community who may come across the study.

You will be offered referrals for highly trained and skilled therapists to address any emotional distress that this study might cause. Also, you will not be identified by name in the report of the study. Should there be further concern about identity, your gender may be changed in the final document of the study, as well as the gender or age of students or individuals that you may discuss, in order to ensure confidentiality for you and your students.

Results of this study may help generate theory around how music teachers can best approach teaching music to individuals with ASD. This can potentially create a foundation for further research around creating more music education opportunities for individuals with ASD. Also, you will be provided with a 1-page summary that will include the final results of the study.

Right of refusal to participate and withdrawal

You are free to choose to participate or not participate in this study. You may also withdraw from this study at any time you wish without any penalties or consequences. Should you choose to withdraw from the study, any confidential information or data will be destroyed. Should you decide to participate in this study, you are free to refuse to answer any questions if you do not feel comfortable.

Confidentiality

All information that you provide throughout the study will remain confidential to the extent provided by the law. The principal investigator will be the only individual who will have access to any confidential information. Your name and identity will not be disclosed or appear in any documents of the study. Your information will be linked to a code, and the list that will connect your information to the code, as well this consent form will be kept in a password protected file, on a password protected computer, which will all be kept in a locked and secured file in my office. Audio recordings will also be kept in the locked file. After the data are analysed and the dissertation study is complete, the locked information and recordings will be destroyed after 7 years. Should an unexpected occurrence arise such as death or incapacitation of the principal investigator, an individual has been identified to destroy the information in place of the principal investigator.

Available sources of information

If you have any questions, concerns, or inquiries, you may contact the principal investigator, Samantha Jimenez, by phone at 206-931-4728, or by e-mail at sjimenez@antioch.edu.

Participant's Consent Declaration

I have read and fully understand the content of this consent form and that participation in this study is voluntary and that I can discontinue my participation in this study at any time without any penalties. I understand that I will also be receiving a copy of this consent form. I choose to participate in this study, and I give my permission for my interview with Samantha Jimenez to be digitally recorded. I understand that anonymity will be insured in the final write-up of this study. I also understand that de-identified extracts from my interview may be quoted in this study and any subsequent publications if I give my permission below:

I agree to quotation/publication of extracts from my interview
(Circle "Yes" if you agree and "No" if you do not agree): YES / NO

Participant Signature:_____

Participant Name: _____

Date: _____

Investigator's Declaration

I have explained and defined in detail the research procedures in which the participant has consented to participate.

Principal investigator Signature: _____

Date: _____