Proceedings of the 13th International Research Symposium on Talent Education (IRSTE)

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Welcome to the 13th International Research Symposium on Talent Education (IRSTE). Founded by the American Suzuki Institute (ASI) and now co-sponsored by ASI and the Suzuki Association of the Americas (SAA), the IRSTE takes place every two years before the SAA Conference begins.

Established in 1990, the goal of the IRSTE is to focus on the application of research as it relates to the Suzuki Method, music teaching, and learning. Participants have the opportunity to hear presentations of completed projects of various researchers as well as meet and talk with presenters at the poster session. It also offers studio teachers the chance to learn some of the basic methods of conducting research in their own program. For more information, a copy of these proceedings and the more recent Suzuki bibliography, please visit our newly expanded and updated website, www.irste.org.

We are particularly excited at this symposium to be able to welcome Dr. Aniruddh Patel to conduct the IRSTE research master class and to present two aspects of his research that directly concern Suzuki teachers’ most fundamental beliefs – the connection between music and language and music and our common humanity.

Our hope is that you’ll leave the day pondering new ideas, stimulated by new ways of thinking and revitalized in your commitment to life-long learning. Enjoy!

Pat D’Ercole, IRSTE Co-coordinator  Karin Hendricks, IRSTE Co-coordinator
Aber Suzuki Center/American Suzuki Institute  Boston University
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**Suzuki Research Bibliography**  

**Suzuki Professional Literature**
13th INTERNATIONAL RESEARCH SYMPOSIUM ON TALENT EDUCATION
MAY 26-27, 2016

Thursday, May 26

2:30  Registration

3:00  Welcome

3:15  Research Master Class: Round table discussion/feedback for researchers with works in progress with Dr. Aniruddh Patel
(IRSTE registrants observe this portion.)

4:45  Poster Session and Snacks

5:30  IRSTE Symposium Keynote Address: “The Origins and Power of Synchronized Movements to Music”
Dr. Aniruddh Patel, Professor of Psychology, Tufts University, Medford, MA

6:15  Q & A

6:45  Announcements & Adjourn

Friday, May 27

8:30  Research Presentations

10:15  Evaluation and Closing comments

10:30  Adjourn

10:45  SAA Conference Keynote Address: “Hidden Connections Between Music and Language Processing in the Brain”
Dr. Aniruddh Patel, Professor of Psychology, Tufts University, Medford, MA

11:50  Q & A
IRSTE Symposium Keynote Address:
The origins and power of synchronized movements to music
Thursday, May 26, 2016

Aniruddh Patel
Tufts University, MA

Playing music with others often involves synchronizing movements to a common underlying beat and/or to each other. The ability to move in synchrony with a beat seems simple, but modern research is revealing that this ability is relatively rare in other species, and involves complex processing in the human brain. Furthermore, moving in rhythmic synchrony with others appears to affect social cognition: how strongly we feel bonded to others, and how much we are willing to help them outside of musical contexts. These findings suggest that group music making that involves synchrony has the potential to help break down social barriers between different types of people, and highlights the power and importance of musical education.
A tenet of the Suzuki method is that learning a musical instrument, such as the violin, can be akin to learning a native language. To what extent is this analogy between the mental processing of instrumental music and language supported by research on the brain? Within cognitive neuroscience, music and language have traditionally been considered very different mental functions. Yet this view is being increasingly challenged by modern research, which has revealed numerous hidden connections between the mental processing of language and instrumental music. In this lecture I will describe several such connections and discuss their implications for our understanding of musical training, and of human cognition more generally.
The Pygmalion in Group Class: 
A Pilot Study Exploring the Rosenthal Effect and the Suzuki Philosophy

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In 1968 Rosenthal and Jacobson presented evidence that if teachers are led to believe that students are more capable, those students perform better in the classroom. In his philosophy, Shinichi Suzuki postulated that all children can achieve musical mastery. He argued that what is perceived as musical genius is simply the result of a proper learning environment coupled with considerable dedication and effort. It should follow that if Suzuki teachers believe Suzuki’s claims, one should see the Rosenthal effect mirrored in Suzuki pedagogy. That is, if a Suzuki teacher believes any given child can achieve musical mastery, their students should show enhanced performance.

This pilot study addresses two questions related to this hypothesis. Primarily, do Suzuki teacher actually believe Suzuki’s claims? Secondly, is there a correlation between teachers’ beliefs and performance of their students? This study assesses student performance within a teacher’s studio based on indicators including: lesson fees, student retention and recruitment, reported rate of progress, studio size, job satisfaction, and quantity of students reaching advanced levels.

By means of a survey sent to members of a Suzuki association, this study has begun to address these questions. Using the results of the pilot study, this paper will discuss ideas for further, more focused, research to explore the effect of Suzuki teachers’ beliefs on the efficacy of their teaching.
Suzuki Method and Traditional Violin Educators:  
An Analysis of Their Training and Teaching from an Injury Preventative Perspective

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Musicians are injured. Existing research reports that playing-related injury occurs in 26% to 93% of instrumentalists (Guptill & Zaza 2010), violin being a top offender. Considering these high rates of injury, it seems profitable to expect music educators’ knowledge of the human body to influence pedagogical stance in crucial areas such as techniques, teaching methods, and practice advice.

Music educators (n=130), who teach violin in a variety of settings, were surveyed concerning their training as well as preference in positional and technical aspects of violin playing in order to gain perspectives, which could lead to future improvements in healthier technique. Participants most commonly reported acquiring understanding of the human body and healthy movement from their private lesson teachers and ensemble directors, while 20% reported having no training in healthy body-use, anatomy, or related topics.

At least 45 of the participants were Suzuki private instructors, while the remaining population was comprised of other string educators. The results demonstrate a divide as to their overarching pedagogical approach to modifications in technique in order to accommodate the individual student’s needs. The positional attributes and techniques Suzuki teachers condone will be compared to those of non-Suzuki teachers. Considerations for future improvements in injury prevention among our students will be discussed as well.
Anxiety and Stress in Musicians:
Why musicians develop stress and anxiety and how they ultimately overcome it

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This research focuses on musicians who experience stress and anxiety due to the profession’s competitive nature and academic and performance demands. The study concentrates on the mental and emotional effects of musicians’ anxiety and stress, and not the physical results and symptoms during a performance. An open-ended interview process was conducted with 39 music students and professionals to discover why they experience stress and anxiety in their profession and study and how they cope with it. The study explores topics relating to why musicians experience stress and anxiety, such as perfectionism, expectation, and perception, and explores coping skills, such as practicing mindfulness, meditation, and exercising. Further results will be discussed.
Wherever they go, they take their music with them:
Examining the function and value of memorization within adolescent music ensembles

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This case study examines adolescent instrumentalists’ perception of music memorization within an ensemble setting. The case, Violet, is a Flemish string youth orchestra consisting of 126 members (ages 8-18) and renowned for giving memorized public performances. Two questions guided my inquiry: 1) how does memorization function throughout Violet’s ensemble structure, and 2) what task-value, as defined by expectancy-value theory (Eccles et al., 1983), do adolescents assign to memorization? Ethnographic methods of participant observation and semi-structured interviews (Bernard, 2002) were used to collect data during a 2-week immersion in 2015 at Violet’s summer music camp. Four ensemble directors and 20 members (ages 12-18) were interviewed. Findings suggest that memorization serves a dual two-staged purpose within each ensemble. At the earliest stages of learning, memorization serves as an educational tool to encourage deeper encoding of information and automaticity. This is the stage when members develop technical facility, as well as formal, melodic, harmonic, and rhythmic discernment. Later in the development process memorization augments performance by facilitating communication between members, increasing attention to other aspects of performance, and supporting creativity. With regards to task-value, members indicated that the memorization process was difficult and time-consuming, which inadvertently caused some anxiety; however, despite this cost, members felt a strong sense of accomplishment after successfully performing by memory in their ensemble. Members also categorized the memorized product as enjoyable, motivating, and useful. Given these findings, I argue that, although memorization is a costly process, performing by memory within the safe confines of an ensemble can be an enriching experience for adolescent musicians. Ensemble memorization may, therefore, offer adolescent musicians an opportunity to develop their memorization skills away from the high-stakes pressures asserted by memorized solo performance.
An examination of problem solving in a professional string quartet

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Preparing music for performance is a process of problem solving. When performers practice, they are problem solving. When studio teachers teach, they are problem solving, often in an interactive, combined effort with students, usually directed by the teacher (Roesler, 2013). A chamber ensemble such as a string quartet represents a unique problem solving experience: a music group comprised of 4 players confronts problems together, as equal colleagues striving to attain common goals.

Professional musicians have reached a high level of musical expertise, evidenced by prolific performance schedules. By nature of their profession, they are required to learn a large amount of repertoire in short periods of time, demanding effective and efficient problem solving. Some research has been conducted exploring professional music teachers’ problem solving during studio lessons (Duke & Simmons, 2006). The professional string quartet, largely unstudied, brings another dimension to the process of musical preparation: four players must vocalize their thought processes to one another while pursuing the perfecting of a piece. Problem solving in this scenario, therefore, is potentially highly transparent and observable.

The purpose of this study is to describe the problem-solving process in the rehearsals of a professional string quartet. I will apply a model of the problem solving process drawn from observations of expert music teaching (Roesler, 2013) that aligns with problem-solving models in other fields (e.g., Hill-Briggs, 2003; Lee, Koh, XCaï, & Quck, 2012; McCarty, Clifton, & Collard, 1999) to analyze how four professional musicians solve problems as a group during a sequence of 3 video recorded rehearsals. I expect to gain insights into the problem-solving process that may inform musical problem-solving in studio, small-group, and large-group music learning and instruction at all levels of musicianship.
A systematic review of music and dyslexia

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Systematic reviews of research provide valuable information for researchers, clinicians, and educators. A single Cochrane Review reports on music and dyslexia; however, the inclusion criteria used in the study required randomized controlled trials (RCT), which resulted in no study being able to be included. The purpose of this systematic review was to identify and analyze research on music and dyslexia. Through computer-based searches utilizing specific keywords and the ancestry approach, 23 studies met inclusion criteria. Once identified, each study was reviewed according to participants, age, purpose, independent and dependent variables, and results. A table was created to outline the analysis of each study. The majority of the 23 articles in the review included children. A few studies focused on the challenges of studying music, in particular problems with reading notation, that students with dyslexia may experience and most of the other studies explored how music can be used to improve literacy skills, or at least be used as a means to test for neural processing of auditory information, and thus could offer the potential to inform early diagnosis. The findings from this review reveal that music training is considered to function as a remediation tool to improve literacy skills for children with dyslexia, although the specific type of music support to achieve predictable outcomes needs to be further investigated. Some limitations, implications for clinical practice, and suggestions for future research are provided.
Children’s temperament and implications for teaching

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Temperamental tendencies are the building blocks of personality (Shiner & Caspi, 2012). Knowing how to teach and support children with different temperaments has been shown to increase classroom success (Rudasill, Gallagher & White, 2009). This poster aims to introduce temperament concepts to Suzuki teachers and researchers to enhance their teaching and research.

Temperament traits are seen early in development, and “include emotional, motor and attentional reactive tendencies and regulative capacities” (Rothbart, 2012, pg 3). As teachers, we intuitively recognize that children are different and our teaching styles have to change in order to have productive lessons with each of our students. Learning about temperament gives us further insight into our students and how to become better teachers for them. For instance, research has shown that children who participated in a temperament intervention in kindergarten and first grade increased their attention, math and reading scores (O’Connor, Cappella, McCormick, McClowry, 2014).

Temperament has been conceptualized as having three core components: Negative Affect, Surgency and Effortful Control (Rothbart & Bates, 2006). Negative affect describes a general tendency to experience negative emotions like discomfort and fear (Mervielde & De Pauw, 2012). Teacher responses can have a buffering effect on children’s negative emotions. Responses that are especially counter-productive for children high in negative affect are nagging, lecturing, or teasing (McClowry, 2014). Surgency describes a social orientation and combines high levels of motor activity and high positive emotion along with other traits (Rothbart & Bates, 2006). Teachers help these students learn best by providing ways for children to move their bodies during lessons to increase and maintain interest. Effortful Control includes inhibitory control, attentional focusing and pleasure from low intensity activities (Mervielde & De Pauw, 2012). Children high in effortful control can inhibit a dominant response to perform a subdominant response (Rothbart, Ellis, Rueda, & Posner, 2003).

Teachers can be effective for all children, regardless of student temperament, if we take the child’s temperament into account and respond by adapting teaching practices.
Student persistence in group-based Suzuki music training and parent ratings of children’s empathy

Kathleen M. Einarson, Nancy Mitchell, Karin S. Hendricks, Elizabeth M. Guerriero, Patricia D’Ercole
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Group based music making impacts young children’s empathy and social skills (Cirelli, Einarson & Trainor, 2015; Kirschner & Tomasello, 2010), and Shinichi Suzuki emphasized the importance of kindness, compassion, and sensitivity to others as part of music instruction (Hendricks, 2011). We investigated whether six months of group music lessons using the Suzuki method increased children’s empathy, as assessed by the Griffith Empathy Measure (Dadds et al., 2008). Parents of students in a Suzuki music program in the Midwestern United States (N = 48) completed a survey at the start of their lesson year, and again six months later. We noted differing trends among those who did or did not continue group lessons for the duration of the study. Mean empathy scores for children who stayed in lessons increased from $M = 2.44$ to $M = 2.67$, while scores for those who did not continue (or did not participate at all) decreased from $M = 1.71$ to $M = 1.58$, over the same period. However, post hoc comparisons indicate that empathy scores were significantly different between these two groups at time one, $p = .048$. Correlations between children’s empathy and parents’ self-reported beliefs about the importance of music instruction ($r = .586, p < .001$) and of Suzuki instruction ($r = .606; p < .001$) are consistent with Corrigall and Schellenberg’s recent observation that aspects of young children’s music training are predicted by parent personality. Our pre-existing group differences are consistent with their observation that child personality is a predictor of music training duration (2015). These findings inform an ongoing larger-scale study of Suzuki programs across the United States and Canada.
Report on Suzuki programs in Canada and the United States

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A survey of the current literature on Suzuki music education shows that although some narrative work has been done, few descriptive studies have been published. This research study sought to characterize Suzuki music programs using an online survey sent to all members of the Suzuki Association of the Americas. The survey elicited up-to-date information about diverse Suzuki teachers and their programs across North America, and described the Suzuki method as it is practiced and implemented in those programs. Areas of interest included both demographic data (e.g. number of students, level of teacher training), information about program structure (e.g. frequency of group and individual lessons), and teachers’ perceptions of Suzuki philosophy.

A number of findings will be of interest to music educators and researchers. In our sample, it is most common for Suzuki teachers to have a master’s degree in music, and to have taken Suzuki teacher training in both short-term and long-term formats. The average private studio for violin teachers is 22 students. Since group classes are also an essential component of Suzuki music training, and teachers were asked to use open-ended survey questions to identify both perceived benefits (e.g. community building) and challenges (e.g. scheduling) of offering group classes in addition to private lessons.

One particularly notable finding was that teachers who reported having taken more Suzuki training were significantly more likely to offer group classes as part of their program. This implies that teachers with less training may require additional targeted instruction and support so they can offer classes and can teach them effectively. Other frequently reported teacher concerns related to lesson planning, classroom management, and differentiated instruction could also be addressed with more targeted training. Despite their challenges, these group classes are central to Suzuki philosophy, and subsequent research is being conducted to investigate the relationship between frequency and duration of Suzuki group classes, the development of students’ empathy, and building community.
Early childhood interactive musical play
and manifestations of empathy-related character traits

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Music scholars have advocated self-directed music learning and teacher-assisted musical play for nearly a century, with more recent research stressing the importance of giving students choice, control, and responsibility for their learning. Furthermore, recent research in music and psychology suggests that participating in musical activity with others can elicit positive social behaviors. The purpose of this research is to observe parent-child-teacher interactions during the music lessons and at-home musical activity of Lily, a three-year-old cello student, to determine how semi-structured, interactive music learning with parents and teacher prompted or encouraged empathy-related character traits.

Music lessons and home practice sessions were semi-structured, using a variety of play formats. Lessons involved the child, teacher, mother, and father who participated together in learning and play activities. The teacher facilitated the lessons by encouraging the child to select from a variety of activities and engage in each for a length of time as determined by the child or negotiated between the child, parents, and teacher.

Lessons and home practice sessions were videotaped and stored for later data analysis. The teacher-researcher also interviewed the parents regarding the child’s musical background, parental beliefs and expectations, and home music environment. Finally, the parents and teacher kept a diary of the child’s interest, involvement, and behavior during various music activities.

The aim of the qualitative analysis was theoretical model building, driven by the Perception-Action-Model (PAM) delineated by Preston and De Waal (2002). In this model, empathic understanding occurs through perception of another that stimulates a cognitive, emotional, or behavioral representation of the emotion or situation in the self. Analysis involved coding of data into three typologies: forms of play, types of musical activity, and empathy-related traits, using criteria exemplified in previous research. Data were sorted and counted to determine frequencies and associations between these typologies.
Development and validation of an empathy survey for Suzuki students and their parents

Karin S. Hendricks, Kathleen M. Einarson, Elizabeth M. Guerriero, Nancy Mitchell, Patricia D’Ercole
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In this study we sought to test the validity of the Griffith Empathy Measure (GEM; Dadds et al., 2008) to study empathic personality traits of Suzuki music students. Parents of children (N = 190) enrolled in Suzuki music programs across Canada and the United States were recruited to complete our survey via a multi-phase demographic study (see Einarson et al., 2015; Guerriero et al., 2016). We were interested both in examining internal consistency among empathy items in the GEM, and in comparing factor loadings of our data sets with previous research. Four items were previously deleted from our adapted GEM survey due to relatively lower internal consistency scores during pilot testing (IRSTE, in preparation).

We conducted a Principal Components Analysis and forced a 2-factor solution based on a priori theoretical assumption of two factors (i.e., cognitive empathy and affective empathy). This solution accounted for 43% of the variance in scores. Additionally, 14 out of 19 item loadings (74%) aligned with findings of Dadds et al. (2008, p. 116). We considered this amount sufficient to warrant use of the scales to compute a third index based on a total mean score of all items, similar to Dadds et al. (2008). Paired-samples t-tests revealed significant differences between empathy types. Strong significant correlations were found between affective items and those items that loaded on both factors, and between cognitive items and those items that loaded on both factors. The correlation between affective and cognitive items was weak but significant, suggesting it is also appropriate combine items for one total score.

Overall, our findings show a relatively strong alignment between those of Dadds et al. (2008), and we consider the GEM to be valid for use in studying Suzuki music students, either as separate cognitive or affective empathy categories, or as an integrated summary to produce a total empathy score. Further research is necessary to explore the various ways in which empathy and music learning interact.

We caution future researchers about making simplistic judgments about the nature of empathic traits, emphasizing the statistically significant differences we found between various manifestations of empathy (i.e., cognitive, affective, and a combination of the two). We also note that it may be problematic to equate empathy with prosocial behaviors such as helpfulness or cooperation. Because the Suzuki method endorses a pedagogy of kindness and respect (see Hendricks, 2011; 2015) and a fundamental belief that “every child can learn,” it may be more appropriate to study the effect of the Suzuki approach on tangible actions or skills, rather than characteristic personality traits.
Parental Involvement in the Development of Musical Aptitude

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No phenomenon devoid of utility survives in a society. Therefore the presence of music in almost every racial or religious society is of great significance. All over the world and Nigeria in particular, there are plethora of musical talent shows being sponsored by telecommunication giants, breweries and other industrial conglomerates such as talent hunt, star quest, and project fame. It was basically understood that the bulk of musical activities going on under these groups were based on what an artiste (musical artiste) achieved on the stage- the actual performance on the stage: it did not show his/her aptitude, that is, the degree to which he/she can succeed if he/she takes a career in music. Only the knowledge of musical aptitude can reveal such. Ten secondary schools were randomly selected from 5 education districts with six hundred students selected using the stratified random sampling technique for the main study. This study reveals that parental involvement in music influences the development of musical aptitude. Those respondents with parents that are involved in music were rated high as having a high musical aptitude than those respondents whose parents are not involved in music. Data was analyzed using the frequency count, simple percentage, along with the spearman’s rho and chi-square statistics for the main study. The implication of the study shows that knowledge of students’ musical aptitude would assist in the selection of musical content, materials and teaching strategies appropriate for each student.
Suzuki Method Research: A Bibliography
Compiled through 2010 by Dr. Alice Ann M. O'Neill
Updated in 2012 by Dr. Karin S. Hendricks
Updated in 2014 by Dr. Nancy Mitchell and Dr. Elizabeth Guerriero
Updated in 2016 by Dr. Nancy Mitchell


Suzuki Method Research:  
Summary of 2016 Bibliography

Tally of research articles, by Instrument
12 - Violin  
6 - Piano  
3 - Cello  
3 - Viola  
2 - Guitar  
2 - Flute  
1 - Clarinet  
1 - Saxophone

Tally of research articles, by Topic:
15 - Empirical Studies  
10 - Philosophy / Method Studies  
7 - Historical Research  
4 - Early Childhood Music Education  
3 - Public School Programs  
3 - Curriculum  
6 - Miscellaneous

Total number of research studies included in this bibliography: 75
Date span of works included: 1966 to 2015

Professional Literature:  
Summary of 2016 References

Total number of professional publications included in this reference list: 16
Date span of works included: 1961 to 2009