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EDITORIAL OFFICE

Daniel Hellman, *MJRME*
Missouri State University
901 South National Avenue
Springfield, MO 65804

danielhellman@missouristate.edu
www.mmea.net/content/mmea-mjrme

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The Editorial Committee of the Missouri Journal of Research in Music Education dedicates this issue to the memory of Dr. Fred Willman (1940-2013). Dr. Willman was the longest-serving member of the Editorial Committee throughout the history of the journal. For thirty-four years, his insightful reviews assisted numerous authors and helped improve the quality of the articles published. Dr. Willman's significant contributions to research in music education will be missed greatly.

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Sibling Relationships and Music Study: A Preliminary Case Study

Chang Liu
Central China Normal University

Wendy L. Sims
University of Missouri

The goal of this research was to provide a preliminary investigation into the relationships among siblings engaged in music study. Data were collected for this case study from one family of three girls, a mother and a father. The girls all were studying music at the time of the study and had received awards for their performances and compositions. The participants responded through written background questionnaires completed by the parents and each of the three siblings, and separate interviews with the parents and each sibling. All interviews were videotaped, transcribed and coded by the members of this research team. Results indicated that benefits in music learning might accrue from the musical interactions among siblings, and that older siblings played a modeling and teaching role for younger ones. Further research into the nature and development of sibling relationships with respect to music learning has the potential to help music educators gain insights related to factors that may impact formal music study.

Family relationships provide an important framework for studying influences on child development. Music education researchers have indicated that how parents behave within the family context is important for children's musical development (Borthwick & Davidson, 2003; Custodero & Johnson-Green, 2003; O'Hagin & Harnish, 2003). The communications between parent and child provide an influence on infants as early as the neonatal period (Field, 1998). These communications not only involve daily interactions among the mother, father, and child but also involve siblings when there are multiple children in a family. Although parents have been the typical family members of interest to music researchers, exploring sibling relationships can expand knowledge of family models and music study. Investigating siblings' interactions, related to music development and study, may provide insights into the extent to which sibling relationships influence, or might even be employed by parents and/or teachers to assist with, children's music development.

Theoretical Framework

Bronfenbrenner's (1979) ecological theory has remained prevalent as one systematic theoretical framework for investigating the family context in children's development. According to Bronfenbrenner, the child is an active person who interacts with and helps others, rather than acting as a passive recipient of experiences. Within the family system, the child has direct interactions with parents and siblings. Bronfenbrenner believed family context to be an essential element of child development. Epstein (1983) investigated the effects of families and schools on student development. The results indicated that students who had more opportunities for interaction and decision-making, whether at home or at school, received better grades and showed more initiative than those with fewer such opportunities. It is necessary to become aware of the important effects of family context on child development.

The theory that knowledge is situated and collaborative, that it is important to evaluate the contextual factors in learning, based on Vygotsky's (1962) work, has generated considerable interest and may be applicable to the family context. As a social constructivist, Vygotsky emphasized the social contexts of learning and that knowledge is mutually built and constructed through interaction with others in cooperative activities. This idea is closely linked to his concept of scaffolding, whereby a more-skilled helper provides a systematic, logical, and rational approach to teaching a less-skilled learner. Perhaps older siblings who are more advanced musically serve as the more-skilled helper in younger siblings' music study.

Sibling Relationships and Child Development

When a family contains siblings, the interaction patterns among family members become more complex than in one-child families. According to Bornstein, "siblings play an important role in children's development from early in life" (p. 23). Apparently, many older siblings enjoy helping their parents take care of their young siblings (Wagner, Schubert, & Schubert, 1985). According to Howea, Karosa and Aquan-Asseeb (2010) "there is a literature indicating links between the quality of sibling relationships and both positive and negative developmental outcomes" (p. 228). Therefore, it seems essential to understand these relationships.

Byng-Hall (1998) reported that siblings have powerful influences on each other. One study revealed that older siblings become a source of care and comfort when their younger siblings are upset (Garner, Jones, & Palmer, 1994). Hoff-Ginsberg and Krueger (1991) found that older siblings make contributions to younger siblings' language development. Younger siblings' tendency to talk more to older siblings than to their mother was identified by Brown and Dunn (1992). According to Sulloway (1996), older siblings demonstrate greater achievements than their younger siblings. These findings indicate

that interactions between siblings are important in a variety of contexts, and consideration of sibling relationships in the context of music study seems warranted.

One aspect of sibling relationships that may raise the most controversy in the literature is related to the potential effects of birth order, especially with respect to the effects of birth order on general intelligence (c.f. Kanazawa, 2012, for a recent review of the literature). Although it is beyond the scope of this article to delve extensively into the large, complex and contradictory body of birth order research, the most relevant recent literature with respect to music study may be related to the effects of birth order on achievement or educational attainment goals, or the accomplishments that individuals strive for in various aspects of life and education. Authors of a study on relationships between birth order and achievement goals concluded, "birth order lies at the heart of people's goal preferences" (Carette, Anseel & Van Yperen, 2011, p. 502). An excellent summary of the competing perspectives related to educational attainment and birth order has been provided by Booth and Key (2009), who explained that:

> There are various hypotheses in the literature about the impact of birth order. Those predicting negative effects relate to greater parental time endowments for lower birth order children, greater devolvement of responsibility to lower birth order children and the simple fact that mothers are older when they have higher than lower birth order children. Those hypotheses predicting positive effects of birth order on education are: the growth of family income over the life cycle; the possibility that older siblings may be encouraged to leave school early to assist in providing resources for the younger members of the family; parental child-raising experience that might advantage younger siblings; and finally, the possibility that younger children may benefit from time inputs both from parents and older siblings. (p. 368)

Theories regarding the competitive aspect of sibling relationships date back to Freud in the early 1900s, although the term sibling rivalry was coined in the 1930's (Levy, 1934), and has been addressed recently in studies of family dynamics. Sibling rivalry may be developed and maintained by parents and/or siblings. Although often used as a pejorative term, "rivalry" does not necessarily have negative results (Stearns, 1988). Competition is a frequent component of music performance study, and music competitions can serve to motivate performers in a positive manner towards achievement goals. There is the potential for siblings engaged in music study to encounter rivalry, whether negative or positive, related to their music performance activities.

Family Context and Music Study

A large body of research has acknowledged that family members play key roles in guiding children's musical development (Bergeson & Trehub, 1999; Brand, 1986; Custodero, Britto, & Brooks-Gunn, 2003; Custodero & Johnson-Green, 2003; Jordan-DeCarbo, 2004; Zdzinski, 1994, 1996). Researchers have examined how parents interact musically with their children. For instance, Custodero and Johnson-Green (2003) described the important roles of adults' past musical experiences in relationship to their musical parenting of infants, while Borthwick and Davidson (2003) showed that children's musical identities are connected with how their parents regard them in the role of musician.

In the music learning process, modeling has been found to be effective (Henley, 2001). Especially, in the family context, modeling is an important tool in musical practices. Parents' singing has been considered as a variable to examine with respect to the frequency of children's vocal interactions. For example, Custodero and Johnson-Green (2003) investigated the frequency and content of adults' playing music and singing for infants. The results indicated that a majority of parents reported playing music (64.5%) and singing to their children (69%) daily.

Music is a social action (Blacking, 1995) involving the interaction among individuals, including family members. A basic musical interaction in the family context is singing, because singing uses the body instrument as a natural communicative tool. By singing songs to babies, parents may deliver non-verbal emotional information to pre-verbal children (Rock, Trainor, & Addison, 1999). In addition, parents can use singing to manage the behaviors of their children; for instance, singing can be used as a tool of comfort or distraction, to release performance anxiety, and to contribute to children's language development (Honig, 1995). Parental involvement and engagement musically plays an important role on children's daily musical experiences, which may ultimately lead to music development. In families where children are engaged in musical instrument study, it is likely that siblings hear each other's musical practice and performances on a regular basis, but the extent or possible effects of these types of exposures have not been identified.

There has been one other study specifically designed to investigate relationships between siblings engaged in music lessons. Liu (2009) investigated how pairs of siblings who were engaged in music lessons characterized their relationships, as well as their parents' perspectives of these relationships. Findings revealed that, "siblings' companionship and support were important functions of sibling relationships in the music learning process" (p. 93). The older siblings served as models and teachers for the younger siblings, and the younger siblings relied on the older siblings to serve in these roles. Parent expectations also played a role in sibling interactions and relationships.

Although research supports the view that family involvement influences children's music study, "family" has primarily referred to "parent" in the

research literature. It is surprising to find little data addressing the roles of sibling relationships on music study in the family context. Therefore, this case study was designed to add to knowledge in this area by (a) investigating the influence of sibling relationships with respect to the music learning process, and (b) examining how siblings engaged in music study interacted with each other within the family context.

Method

A family that included children who were all engaged in music study was recruited from a city in the central United States to participate in this case study. The family had been identified and selected because of the children's participation in a music composition contest sponsored by a large mid-western university. All three sisters were winners in different age divisions of the competition, and each girl performed her own composition in the winners' concert. The parents were originally from Taiwan, and had been living in the United States for approximately 16 years, but all three siblings were born in the United States. For the purposes of this study the children will be identified as Cello, age 15, Viola, age 13 and Violin, age 9. Cello had taken piano lessons since the age of 6 and began studying violin at age 7; Viola and Viola each began piano lessons at the age of 5 and began studying violin at age 6. All three attended public schools with music programs recognized for their high quality.

The first author of this study, fluent in both Chinese and English, contacted the parents and described the purposes of this study by email. After obtaining permission from the parents, a telephone call followed to more specifically explain the procedures of this study. This information was initially provided in Chinese by the researcher. A letter of invitation to participate in this study, along with IRB-approved consent forms for both parents and the three siblings, were provided at the initial face-to-face meeting with the researcher.

The first phase of this study involved the completion of written demographic questionnaires by the family members in order to obtain information related to factors such as age, current level of education, country of origin, age at the time of beginning music study, participation in competitions, and so forth. Each family member completed the questionnaire in English.

The second phase of the study involved interviewing both parents and each of the three siblings individually, in order to obtain independent data about the sibling relationships related to music study. The English-Chinese bilingual researcher conducted the interviews primarily in Chinese, with which the parents and three siblings were all comfortable, although during the interviews, English and Chinese were spoken interchangeably. A video camera was used to record each interview, with the entire process taking approximately three hours. During the interviews, the time was typically used to discuss a variety of topics such as the family member's music background, music learning experiences, and sibling relationships in music study. The researcher directed the

interviews with the parents and siblings based on predetermined open-ended questions (e.g., "tell me about your [your daughters'] piano playing," "do you [your children] help each other with practicing," and so forth), but the goal was to say as little as possible and keep the participants talking. The interviewing procedure with the three siblings was simplified and situated in a story-telling context, to make it more interesting and comprehensible for the children. The parents and three siblings did not share their answers with one another prior to the completion of all interviews (e.g., parents did not know children's answers for some similar questions).

All verbal episodes of interviews were transcribed from the video recordings and then coded. The data were transcribed, translated, and coded initially by the native Chinese speaking researcher to identify themes related to the research questions, using standard qualitative open coding procedures (Creswell, 2005). The native English speaking co-author assisted with initial coding, and both authors agreed upon the analysis and combination of coded data into categories and themes for interpretation. It should be noted that the translation was not verbatim from the video recordings, because of the differences between the structures of the two languages; the Chinese was translated into more typical English constructions. Therefore, another native Chinese speaker fluent in English who was not involved in the research checked randomly selected sections of the translation to ensure that the meanings were retained by the translation.

Findings

Analyses were directed at answering the two research questions: (1) What was the influence of sibling relationships on musical development? and (2) How might the interactions between siblings with respect to music study be characterized? Three themes emerged from the data analysis: helping and supporting, individual differences, and rivalry among siblings in the music learning process. The findings were comparable among the parents' interviews and siblings' interviews, which is consistent with previous research demonstrating that family members generally shared perceptions of sibling relationships (Minuchin, 1988). Analyses demonstrated the positive impact of sibling relationships on music study within the family context.

Helping

One thematic aspect of the sibling relationships drawn from the data was help and support. The siblings provided assistance to one another when studying music. Generally, helping and supporting within the family originated directly from parents to children, and later from children back to parents. When the need for helping and supporting was beyond the ability of the parents, or was best met by the other children, siblings were able to undertake and fulfill this obligation.

How did the parents feel about and perceive the helping and supporting among their children in the music learning process? The mother in this study stated:

> Three of them are able to work together with music. Especially the oldest one always helps the other two younger ones. When Cello was young, I could coach her since I have a little piano background. However, as she reached the more advanced level, the more help she provided to the other two sisters. And, Cello is very happy to do that, because she feels that she is the oldest one, and…she is better than her younger sisters on piano playing. The same thing is happening now…Viola helps Violin a lot recently because Cello is busy doing her regular study. However, Violin doesn't like Viola's instruction, cause Viola is not so good at piano playing. Violin knows, Viola's piano frequently is wrong, so she (Violin) asks me when she gets trouble now.
> When the youngest one starts to play a new piece that the oldest one already played, the oldest one often plays it as a good model. This can give the youngest one a big picture how this piece 'looks'.

Based on the following comments, it appears that sibling helping is an example of issues of dependency between siblings, and that sibling helping involves different roles, responsibilities, and developmental achievements for those siblings who offer or receive the helping. Bryant (1981) found that a majority (78%) of later-born children said that they had a sibling who would help them with their homework. During the interviews with the three siblings, we specifically examined the extent to which these sibling roles developed in music study:

> Cello: I love being with my sisters. I play with them, and help them when they have trouble on playing piano.
> Viola: I am happy to help my younger sister because she is too young. I don't need to help my old sister because she always does better than me…on piano playing. However, I am better than her on composition…I want to be a composer.
> Violin: Originally, I played with my oldest sister a lot. She helped me play piano. But, now, I play with Viola much more because Cello is busy doing her homework. Mom often lets them play the piece that they have played previously for me…I like to play with my sisters.

Older siblings can provide a great deal of help to their younger siblings. In another case study, Gump, Schoggen, and Redl (1963) reported that approximately one-half of a particular nine-year-old's interactions with children were with siblings, and that he interacted more with children than adults.

When the parent participants in the current study were not able to be with the children, the older sisters sometimes assumed the adult's role in taking care of the younger sisters in the family. For example, the mother recalled:

> At the beginning of studying piano, I was able to coach them. But, when the skills were more advanced, I could not do that. At that time, Cello helped me.
> The oldest one, Cello, is a really good model between them. Sometimes she acts like a tutor…Cello is patient…has good personality. In other words, she helps me very much on taking care of the younger ones as well when playing piano.

Individual Differences

Another aspect of the relationships among siblings engaged in music study, drawn from these data, was the differences of individual's behaviors when studying music. In the literature, there has been more concern placed on the effects of birth order on siblings' behaviors than on most other aspects of sibling relationships (although, as noted previously, with much controversy about the validity of birth order as a variable). Mothers have been found to look after siblings differently as a function of birth order, expecting more of first-born infants (Cushna, 1966; Lasko, 1954), and interacting with them more (Cohen & Beckwith, 1977; Jacobs & Moss, 1976). Consequently, first-born children have been found to show superior development in early childhood. Exner and Sutton-Smith (1970) reported that the first-born children, being more adult-like, would be more responsible, conservative, and consider themselves as more elderly and self-controlled. It is interesting to examine the differences of personal music behaviors by birth order in this family. As the parents in this study recalled,

> Mother: Cello is silent, patient, and she has a stable music development, especially on piano learning. I asked her to study piano first, and coached her a lot. However, now, I believe that she likes to play piano. In my eyes, Cello has never done anything bad. She is able to get almost everything done very well by herself. So, I didn't really worry about her after she became older. Like…she is so pure and good personality, so Viola and Violin all respect her so much.
> You know? Viola is really active, out-going, and she is good at composition…She always plays piano without the music score… She likes to compose.
> Father: But, you know, sometimes, Viola doesn't like her old sister because Cello wants to lead her, or manage everything.
> Mother: Violin is too young, so she likes to ask my advice.

Cello had taken on a parental role in various aspects of her younger siblings' music study. This is typical in families, generally where older siblings, especially sisters, are involved in the care of younger ones (Edwards & Alldred, 2000). As all three of the siblings in this family put it:

> Cello: I like to play piano. I am good at playing piano. I like composition as well. But, Viola is better than me on composition. I started to learn composition and violin after Viola…Viola always messes things up…because she is too young. I think that she needs my help. I see myself as the oldest one, so I act differently…Sometimes, I can help Mom to take care of them.
> Viola: I don't like to play piano. Um…Actually, I don't like to play the music on the book. I like composition. I learned violin earlier than them, but I don't like it now…Cello often leads us, but I can do well if I am the leader. I don't like, that Cello sometimes was harsh me.
> Violin: I play piano and violin just because my sisters are playing them.
> Mother: One day, after Violin went back from school, she asked me, "Mom, not everybody plays piano in my class. I don't have to play piano, right? ...but…my two sisters are playing…so I am playing."

Individual differences between siblings existed within this family, and the girls were able to understand and express this.

Sibling Rivalry and Music Competitions

Rivalry between siblings often involves comparisons among or competition between siblings with varying strengths and weaknesses. In this family, participation in music competitions was a regular part of music study for the three girls. Cello, the oldest, became the leader to the other two when participating in the competitions. Sometimes Cello noticed that her younger sisters were having difficulty with their music during practice. She coached them and made sure that they were back on track.

During the interview the girls were asked how they felt about their sisters' competitions and accomplishments. Their responses, below, also reflect responses to a question related to their familiarity with professional pianists, The Five Browns, a set of very successful siblings who had performed in the girls' city while on tour earlier in the year:

> Cello: I don't think about it [competition] a lot because I am older than them. We are not on the same level. We just participate in the competition together… I watched the performance

> by Five Browns…Umm, I like them. I like to play with my sisters as well…I can play the easy pieces because Violin is too young.
> Viola: I am good at composition; so, I got good ratings on composition. However, I don't like piano. My old sister plays very well…I am happy if she wins…I like Five Brown…We can be like them.
> Violin: I am happy to be with them. I am happy if they win. I am younger than them, so I am not, not like them…not the same [level]…They are older than me, so they play better than me…I am a little upset if I don't get a good rank…I won't say about it…I am upset, but I don't tell anybody…I like to play piano with my sisters, just like Five Browns…But, I am too young.

The two older siblings maintained a positive and supportive attitude towards one another during the competitions. The mother commented that she always told them not to compare themselves with one other. The two older girls reported independently that they rarely felt competition with their siblings about their accomplishments. When asked about the extent of arguments with siblings, each of them said they never argued and that they rarely talked about the results of competitions. These comments suggest a low level of sibling competitiveness and conflict in music study within this family.

Discussion

Many children spend time after infancy in the care of older brothers and sisters (Barry & Paxson, 1971; Whiting, 1963; Whiting & Whiting, 1975). Overall, this study's findings indicated that the participants, according to the parents' and siblings' interviews, accrued benefits in the music learning process from interactions among the siblings. Another finding was the presence of individual differences in the girls' music learning and perspectives on music study. A third result was that while sibling competition was a major stimulus and encouragement in music development, rivalry did not appear to present problems for the girls. Of course, the data from this study were based on one family, and conclusions should be considered preliminary. Further research will be required to determine whether the ideas may transfer or generalize to other family situations.

The relationship of the siblings in this study reflected mainly the "positive dimension of relationship quality, labeled warmth/closeness, [which] includes companionship, intimacy, affection, and prosocial behaviour (e.g. helping)," as opposed to "negative sibling interaction [that] includes three dimensions: conflict, rivalry, and relative status/power" (Howea, Karosa, & Aquan-Asseeb, 2011, p. 228). This finding is similar to that of Liu (2009), whose participants reported positive attitudes and relatively low levels of rivalry related to the siblings' music study, and generally appreciated each other's accomplishments.

According to Liu (2009), "Sibling rivalry, instead of being a problem in these families, appeared to stimulate children with a music learning social environment that was warm and caring" (p. 86).

This study's findings, like those based on more formal testing of children, demonstrate that to understand the theories children hold about people and learning, and to gain a valid picture of their abilities, it is important to study them within their families. However, like most early studies in a research program, this one raises many questions. The first concerns the helping and supporting behavior between siblings in music study. The comments made by the oldest sister showed that she had a good understanding of her younger siblings' likes, dislikes, wants, and intentions, and some notion of their present musical capabilities. Although children can anticipate some assistance with music study from their siblings, the nature of this helping, supporting behavior may well differ depending on the sibling structure within the family. That structure might include the position in the family defined by the number of siblings, birth order, ages, sexes, and age spacing. For example, based on the results of their study of achievement goals related to birth order, Carette, Anseel and Van Yperen (2011) concluded that "achievement strivings may involve different personal goals that were found to be differentially affected by birth order . . . Firstborns may be more motivated to learn, whereas second borns may be more motivated to win" (p. 503). Perhaps Violin was reflecting this to some extent when she described her strength at composition in terms of "good ratings" and understanding that she could not compete with her older sister on the piano.

Another issue concerns the individual differences of music behaviors within the family. The findings outlined suggest that there were important similarities and differences between the siblings when studying music. However, we have only indicated a few ways in which the siblings were different in music learning processes. Are these differences generalizable, or one-family-sample differences? Are these individual differences a cause or an effect of the interaction between siblings? How do these differences influence sibling relationships? If parents and teachers could understand the differences, and gain knowledge of the effects of sibling relationships in music study, perhaps they could use this information to help guide sibling interactions and take better advantage of the role of siblings in music study.

One interesting issue that arose concerns the issue of rivalry between siblings. The findings indicated a weak feeling of sibling competitiveness among these sisters, at least on an overt level. Yet, why did the siblings not share their competitive feelings with each other, especially the youngest one? In this study, Violin could not explain why she did not want to admit to disappointment when she did not "get a good rank" at a competition. Cello, Viola, or Violin rarely acted overbearing in the competitions. However, a number of studies linking sibling competition to problems of mental health may provide some clues (Cavenar & Butts, 1977; Frank, 1979; Robbins, 1964). Admitting sibling competition may be considered threatening or embarrassing,

maybe like admitting maladjustment. Furthermore, to show feelings of competition to a sister who gets stronger results or upper level scores may increase one's vulnerability in an unsafe situation. Another possible consideration may be the social/cultural norms and expectations within the family. Certainly this is a topic worthy of further investigation.

While previous research related to the effects of family influences on children's music study and development has primarily been addressed toward parent-child interactions, sibling relationships and interactions during music study have received very little attention. The evidence presently available indicates that studies designed to illuminate musical interactions between siblings, including topics of sibling relationships and the more complex angles of interpersonal interactions between siblings related to music study, would indeed be warranted. Continued description of the nature and development of sibling relationships in the music learning process may help music educators gain insights about informal influences on music study, which take place outside of, yet may have an impact on, the formal music study in classrooms and studios.

References

Barry, H., III, & Paxson, L. M. (1971). Infancy and early childhood: Cross-cultural codes 2. *Ethnology, 10,* 466-508.

Bergeson, T. R., & Trehub, S. E. (1999). Mothers' singing to infants and preschool children. *Infant Behavior and Development, 22,* 51-64.

Blacking, J. (1995). *Music, culture, and experience: Selected papers of John Blacking.* Chicago: University of Chicago Press.

Bornstein, M. H. (2012). Proximal to distant environments in child development. In L. Mayes & M. Lewis (Eds.), *The Cambridge handbook of environment in human learning* (pp. 15-34). London: Oxford University Press.

Borthwick, S. J., & Davidson, J. W. (2003). Developing a child's identity as a musician: A family 'script' perspective. In R. MacDonald, D. Hargreaves, and D. Miell (Eds.), *Musical identities* (pp. 60-77). Oxford, UK: Oxford University Press.

Brand, M. (1986). Relationship between home musical environment and selected musical attributes of second-grade children. *Journal of Research in Music Education, 34*, 111-120. doi: 10.2307/3344739

Bronfenbrenner, U. (1979). *The Ecology of Human Development.* Cambridge: Harvard University Press.

Brown, J. R., & Dunn, J. (1992). Talk with your mother or your sibling? Developmental changes in early family conversations about feelings. *Child Development, 63,* 336-802. doi: 10.1111/1467-8624.ep9207061015

Bryant, B. & Crokenberg, S. B. (1980). Correlates and dimensions of prosocial behavior: A study of female siblings with their mothers. *Child Development, 51,* 529-544. doi: 10.1111/1467-8624.ep12329678

Byng-Hall, J. (1998). Evolving ideas about narrative: re-editing the re-editing of family mythology. *Journal of Family Therapy, 20,* 133-141. doi: 10.1111/1467-6427.00074

Carette, B., Anseel, F., & Van Yperen, N. W. (2011). Born to learn or born to win? Birth order effects on achievement goals. *Journal of Research in Personality, 45*, 500–503. doi:10.1016/j.jrp.2011.06.008

Cavenar, J. O., & Butts, N. T. (1977). Fatherhood and emotional illness. *American Journal of Psychiatry, 134*, 429-431.

Cohen, S. E., & Beckwith, L. (1977). Caregiving behaviors and early cognitive development as related to ordinal position in preterm infants. *Child Development, 48*, 152-157. doi:10.1111/1467-8624.ep10438604

Creswell, J. W. (2005). *Educational research*. Upper Saddle River, NJ: Pearson Prentice Hall.

Custodero, L. A., Britto, P. R., & Brooks-Gunn, J. (2003). Musical lives: A collective portrait of American parents and their young children. *Journal of Applied Developmental Psychology, 24*, 553-572. doi: 10.1016/j.appdev.2003.08005

Custodero, L. A., & Johnson-Green, E. A. (2003). Passing the cultural torch: Musical experience and musical parenting of infants. *Journal of Research in Music Education, 51*, 102-114. doi: 10.2307/3345844

Edwards, R., & Alldred, P. (2000). A typology of parental involvement in education centering on children and young people: negotiating familialisation, institutionalization and individualization. *British Journal of Sociology of Education, 21*, 435-455. doi: 10.1080/713655358

Epstein, J. L. (1983). Longitudinal effects of family-school-person interactions on student outcomes. *Research in Sociology of Education and Socialization, 4*, 101-127.

Exner, J. & Sutton-Smith, B. (1970). Birth order and hierarchical vs. innovative role requirements. *Journal of Personality, 38*, 581-587. doi: 10.1111/1467-6494.ep8933557

Field, T. (1998). Maternal depression effects on infants and early interventions. *Preventive Medicine, 27*, 200-203. doi: 10.1006/pmed.1998.0293

Frank, H. (1979). Psychodynamic conflicts in female law students. *American Journal of Psychoanalysis, 39*, 65-69.

Garner, P. W., Jones, D. C., & Palmer, D. J. (1994). Social cognitive correlates of preschool children's sibling caregiving behavior. *Developmental Psychology, 30*, 905-911. doi: 10.1037/0012-1649.30.6.905

Gump, P., Schoggen, P., & Redl, F. (1963). The behavior of the same child in different milieus. In R. G. Baker & L. S. Baker (Eds.) *The stream of behavior* (pp. 169-202). New York: Appleton-Century-Crofts.

Henley, P. T. (2001). Effects of modeling and tempo patterns as practice techniques on the performance of high school instrumentalists. *Journal of Research in Music Education, 49*, 169-180. doi: 10.2307/3345868

Hoff-Ginsberg, E., & Krueger, W. (1991). Older siblings as conversational partners. *Merrill-Palmer Quarterly, 37*, 465-481.

Honig, A. S. (1995). Singing with infants and toddlers. *Young Children*, *50*(5), 72-78.

Howea, N., Karosa, L. K., & Aquan-Asseeb, J. (2011) Sibling relationship quality in early adolescence: child and maternal perceptions and daily interactions. *Infant and Child Development, 20*, 227-245. doi: 10.1007/s00148-007-0181-4

Jacob, B. S., & Moss, H. A. (1976). Birth order and sex of siblings as determinants of mother-infant interaction. *Child Development, 47*, 315-322. http://www.jstor.org/stable/1128784

Jordan-DeCarbo, J. (2004). The power of musical parenting in home and school settings. *Early Childhood Connections, 10*(4), 49-59.

Kanazawa, S. (2012). Intelligence, birth order, and family size**.** *Personality and Social Psychology Bulletin, 38,* 1157–1164. doi: 10.1177/0146167212445911

Kee, H. J. & Booth, A. L. (2009). Birth order matters: the effect of family size and birth order on educational attainment. *Journal of Population Economics, 22*, 367-397. doi: 10.1007/s00148-007-0181-4

Lasko, J. K. (1954). Parent behavior toward first and second children. *Genetic Psychology Monograph, 49,* 99-137.

Levy, D. M. (1934). Rivalry between children in the same family. *Child Study*, 11, 233-237.

Liu, C. (2009). *Relationships between siblings engaged in music study: An exploratory investigation*. (Unpublished doctoral dissertation). University of Missouri, Columbia, MO.

Minuchin, P. (1988). Relationships within the family: A systems perspective on development. In R. A. Hinde, & J. Stevenson-Hinde (Eds.), *Relationships within families: Mutual influences* (pp. 7–25). Oxford: Clarendon Press.

O'Hagin, I. B., & Harnish, D. (2003). Reshaping imagination: The musical culture of migrant farmworker families in northwest Ohio. *Bulletin of the Council for Research in Music Education, 151,* 21-30.

Robbins, S. D. (1964). 1000 stutterers: A personal report of clinical experiences and research with recommendations for therapy. *Journal of Speech and Hearing Disorders, 29*, 178-186.

Rock, A. M. L., Trainor, L. J., & Addison, T. L. (1999). Distinctive messages in infant-directed lullabies and play songs. *Developmental Psychology, 35*, 527-534. doi: 10.1037/0012-1649.35.2.527

Stearns, P. (1988). The rise of sibling jealousy in the twentieth century, in Stearns, C. & Stearns, P. (Eds,) *Emotion and Social Change: Toward a New Psychohistory (*pp. 193-222). New York, Holmes & Meier

Sulloway, F. J. (1996). *Born to rebel: Birth order, family dynamics and creative lives.* London: Little, Brown and Company.

Vygotsky, L. S. (1962). *Thought and language.* Cambridge, MA: MIT Press.

Wagner, N. E., Schubert, H. J. P., & Schubert, D. S. P. (1985). Family size effects: A Revision. *Journal of Genetic Psychology, 146*, 65-78. doi: 10.1080/ 00221325.1985.9923448

Whiting, B. B. (1963). *Six cultures: Studies of child rearing.* New York: John Wiley & Sons, Inc.

Whiting, B. B., & Whiting, J. W. M. (1975). *Children of six cultures: A psychocultural analysis.* Cambridge: Harvard University Press.

Zdzinski, S. F. (1994). Parental involvement, gender, and learning outcomes among instrumentalists. *Contributions to Music Education, 21,* 73-89.

Zdzinski, S. F. (1996). Parental involvement, selected student attributes, and learning outcomes in instrumental music. *Journal of Research in Music Education*, *44,* 34-48. doi: 10.2307/3345412

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The Effect of Score Use, Performance Level, and Instrumentation on Musicians' Evaluations of Orchestral Performances

David Pope
Manatee High School (FL)

The purpose of this study was to determine whether the viewing of a musical score, performance level, and instrumentation would affect musicians' ratings of orchestral performances. Using a 10-point Likert-type scale, university musicians (N = 70) evaluated four recorded orchestral excerpts for technique and musicality. The recordings included two instrumentations and two performance levels (professional string orchestra, professional full symphony orchestra, all-state string orchestra, and all-state full symphony orchestra). Participants were also assigned into groups who viewed and did not view scores. Results of a MANOVA revealed that professional orchestras were rated significantly higher than all-state orchestras. String orchestras received significantly lower ratings than full symphony orchestras. No significant differences were identified in participants' evaluations when examining score use. A significant multivariate interaction revealed that professional string and full symphony orchestras received higher scores than all-state string and full symphony orchestras.

Effective evaluations serve as an important component of music education. Many educators rely on evaluations as an integral assessment tool for their ensembles. During daily rehearsals, teachers frequently evaluate the musical and technical aspects of students' performances. At other times, music directors seek feedback for their ensembles from judges at district, region, and state adjudicated festivals. In public school settings, adjudicators' evaluations affect the individual student, the performing ensemble, and the music educator. Evaluations determine all-state ensemble participation and frequently influence what ensembles perform at state and national festivals. Ensemble evaluations also shape music educators' careers. Frequently school administrators lack the necessary expertise to effectively evaluate music educators, and rely upon evaluations provided at adjudicated festivals to determine the effectiveness of music educators and music programs. As a result of the growing importance of adjudicated festivals, all aspects of assessment should be examined to ensure music educators and their students receive accurate evaluations.

Researchers have revealed that music's rhythmic and instrumental texture appears to influence adjudicators' evaluation abilities (Byo, 1993, 1997; Byo & Sheldon, 2000; Crowe, 1996; Hayslett, 1992; Huron, 1989; Sheldon, 1998, 2004). In a series of investigations, music majors accurately detected more

performance errors during solo or homorhythmic contexts than in multiple instruments or polyrhythmic textures (Byo, 1993, 1997; Byo & Sheldon, 2000). Supporting those findings, Crowe (1996) and Sheldon (1998, 2004) also found that musicians' error detection skills decreased as the number of instruments or musical timbres increased. In excerpts with multiple musical lines, performance errors in the outer voices were more likely to be identified (Hayslett, 1992; Huron, 1989). In a three-voice musical texture, errors in the melodic line were more accurately detected than those in the bass line (Hayslett, 1992). Those results demonstrate that error detection accuracy decreases with musical texture complexity.

Few music researchers have examined the influence of instrumentation on adjudicators' evaluations (Bergee & Platt, 2003; Geringer & Madsen, 1998). Geringer and Madsen (1998) found that music majors assigned higher ratings to accompanied string and vocal performances than unaccompanied performances. Contrary to those findings, Bergee and Platt (2003) revealed that solo performances received significantly better ratings at adjudicated festival than small chamber ensembles.

Non-musical variables also affected adjudicators' evaluations of music performance. Results from past research indicate that musicians can accurately distinguish between solo and ensemble performances at different performance levels (Byo & Brooks, 1994; Byo & Crone, 1989; Ciorba & Smith, 2009; Geringer & Johnson, 2007; Geringer, Madsen, & Dunnigan, 2001; Johnson & Geringer, 2007; Madsen & Geringer, 1999; Napoles, 2009; Schleff, 1992). Professional and university level wind ensembles received more favorable ratings from musicians than from middle and high school ensembles (Byo & Brooks, 1994; Geringer & Johnson, 2007; Johnson & Geringer, 2007). In an investigation of choral performance evaluations, Napoles (2009) found that professional ensembles were rated higher than high school ensembles. While researchers have compared the evaluations of wind and choral ensembles at various performance levels, none have examined the influence of performance level on the evaluations of amateur and professional orchestras.

Due to the limited number of investigations, there seems to be no conclusive evidence indicating that adjudicators' use of musical scores affects evaluations. Wapnick, Flowers, Alegant, and Jasinskas (1993) discovered that adjudicators' ratings were more consistent when not viewing scores than when viewing scores. While evaluating a university level band performance, Droe's (2012) participants gave more disapproving comments when viewing scores. Musicians' who viewed scores when evaluating recorded choral performances assigned lower ratings than those who did not view scores (Napoles, 2009).

While previous researchers investigated the influence of score use, performance level, and instrumentation on adjudicators' evaluations, limited research has been conducted using those variables in string education. The present study examined the impact of those variables on adjudicators'

evaluations of orchestral ensembles. The purpose of this study was to determine whether musical score use, performance level, and instrumentation would affect musicians' ratings of recorded orchestral performances. Performing ensembles for this study included both string only and full symphony orchestras at professional and all-state levels. The following research questions guided this study: (1) Are there differences in musicians' evaluations of orchestral performances when viewing and not viewing a musical score? (2) Are there differences in musicians' evaluations of all-state and professional orchestral performances? (3) Are there differences in musicians' evaluations of string and full symphony orchestra performances? (4) Are there differences in musicians' evaluations of technique and musicality?

Method

Participants

Participants (N = 70) were undergraduate (n = 56) and graduate (n = 14) university level music majors at a large public university in the southeastern region of the United States. Participants had played their primary instruments for an average of 11.41 years, and they identified their primary performance area as vocalist (n = 10), instrumentalist (n = 55), or both a vocalist and instrumentalist (n = 5). Forty-two females and 28 males took part in this study. All participants were enrolled in music education and pedagogy courses. This population was selected because many of those students will serve as evaluators at district, region, and state adjudicated concert festivals throughout their careers.

Music Stimuli

To examine the effect of instrumentation on evaluations, the researcher had participants adjudicate recordings of standard string and full symphony orchestra repertoire. The "Prelude" from Bloch's *Concerto Grosso No.1 for Strings with Piano Obbligato* was chosen as the string orchestra selection, and the "Finale" from Tchaikovsky's *Symphony No. 4 in f minor, Op. 36* as the full symphony orchestra selection. Those pieces were chosen due to their similarity in tempo, dynamics, and difficulty. From each of the selections above, a one-minute excerpt was chosen as the music stimuli. To investigate the influence of performance level on participants' evaluations, professional and all-state recordings for both the string and full symphony orchestra excerpts were selected. The Academy of St. Martin-in-the-Fields (string orchestra excerpt) and London Symphony Orchestra (full symphony orchestra excerpt) studio recorded the professional excerpts used in this study. The all-state recordings for the string and full symphony orchestra excerpts were selected from recorded all-state performances in a single state located in the southwest region of the United States. Two all-state ensemble recordings were selected for this study,

and three experienced music educators with teaching experience in multiple geographic regions of the United States concurred that the two recordings were of the same performance quality and represented the highest level of all-state performances. A different panel of three experienced music educators listened to the four recordings and agreed that the professional ensembles performed at a considerably higher performance level than the all-state ensembles. The total duration of the music stimuli CD was ten-minutes, which included the four 60-second orchestral excerpts. A ninety-second break was placed between each excerpt to allow participants time to complete the evaluation form for each ensemble. To limit page turns and to match formatting of the published score, each score was photocopied front and back. Scores were labeled #1 (string orchestra) and #2 (full symphony orchestra), so that participants could easily identify which score to use while listening.

Design and Procedure

Prior to collecting data, the researcher received approval for the project from the IRB, and each participant completed a consent form. All participants (N = 70) listened to and evaluated the four excerpt recordings in small groups consisting of three to five students. The four recordings consisted of the following: professional string orchestra, professional full symphony orchestra, all-state string orchestra, and all-state full symphony orchestra. In an attempt to control for order effects, eight random orders of the recordings were predetermined, and participants were assigned to one of the eight listening groups. Each listening group included an equal number of participants that either viewed (n = 35) or did not view scores while listening (n = 35). For participants who viewed scores, the researcher verbally indicated which score (#1 or #2) to watch prior to listening to each excerpt. Participants who viewed scores during this study were directed to watch the musical score during the entirety of each excerpt. Because the string and full symphony orchestra excerpts were performed by the all-state and professional ensembles, participants who viewed scores used each score twice. Prior to starting the project, participants were given the following directions:

> Thank you for participating in this study. Included in your evaluation packet are a demographic questionnaire and four rating sheets: one for each orchestral performance. Each rating sheet is labeled A, B, C, or D to correspond with the recordings you will hear. Please make sure you complete the correct rating sheet for each ensemble. For this project, you will be evaluating four different orchestral performances. Each ensemble will perform a one-minute musical excerpt. Please listen to the entire excerpt (and follow along in the score if you have scores) and evaluate each ensemble on its entire performance. At the conclusion of each

> ensemble's performance, you will have ninety-seconds to complete the rating form for that group. You will circle your assigned rating for musicality and technique. Please also write comments that demonstrate why you assigned the ratings you gave. Please fill out each rating form completely. Do you have any questions?

Participants evaluated musicality and technique for the four recordings on a 10-point Likert-type scale (1 = poor performance; 10 = superior performance). Two versions of the evaluation packet were created. The only variation between the two evaluation packets occurred in the printed instructions included in each packet. One version was for participants who viewed scores while listening, and the other was for those who did not view scores. Participants were also provided space to write additional comments about their technique and musicality ratings. Written comments were not statistically analyzed since most participants did not to provide written feedback to explain their ratings.

After each excerpt, participants were allowed ninety-seconds to rate technique and musicality and provide written comments. A twenty-second verbal warning was provided as the evaluation period passed. At the conclusion of the ninety-second evaluation period, participants were asked to turn the page to the next evaluation sheet. Before continuing to the next recording, participants verbally confirmed with the researcher that they were on the correct evaluation form (A, B, C, or D).

Results

Table 1 provides the mean scores and standard deviations for all variables. Mean scores ranged from 6.20 to 9.26 with standard deviations between .85 and 1.92 across score use, performance level, instrumentation, and rating type. Participants assigned the professional string orchestra recording the highest mean score of the four ensemble recordings. The all-state string orchestra recording was assigned the lowest overall mean score.

An examination of performance level and rating type revealed that professional ensemble recordings received higher scores than the all-state ensemble recordings for both technique and musicality (shown in Figure 1). Music majors' scores for technique (M = 8.86, SD = 1.15) and musicality (M = 8.58, SD = 1.31) of professional orchestral recordings were higher than ratings for technique (M = 7.04, SD = 1.90) and musicality (M = 7.39, SD = 1.63) for the all-state orchestral recordings.

Table 1. *Mean Technique (T) and Musicality (M) Ratings of Recorded Performances (Standard Deviations in Parentheses)*

	Professional				All-State			
	String Orchestra		Full Symphony		String Orchestra		Full Symphony	
	T	M	T	M	T	M	T	M
Scores	9.14	8.97	8.54	8.34	6.43	6.57	7.86	8.09
(*n* = 35)	(.85)	-0.95	(1.27)	(1.37)	(1.85)	(1.67)	(1.48)	(1.34)
No Scores	9.14	9.26	8.60	7.74	6.20	6.71	7.69	8.17
(*n* = 35)	(.91)	(1.01)	(1.40)	(1.36)	(1.78)	(1.62)	(1.92)	(1.18)
Overall	9.14	9.11	8.57	8.04	6.31	6.64	7.77	8.13
(*n* = 70)	(.87)	-0.99	(1.33)	(1.39)	(1.81)	(1.64)	(1.70)	(1.25)

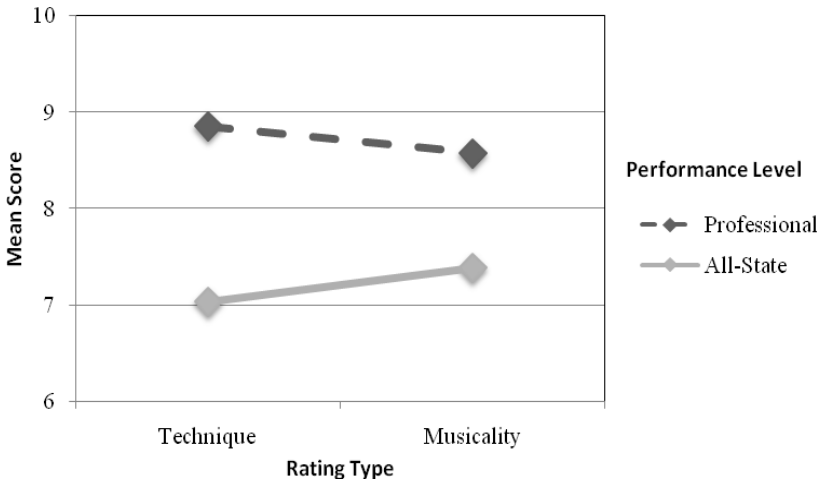

Figure 1. *Mean technique and musicality ratings for each performance level.*

For both performance levels, listeners rated musicality more similarly than technique. Participants assigned higher scores to full symphony orchestra recordings than string orchestra recordings when evaluating technique and musicality (see Table 2).

Table 2. *Mean Rating Type, Performance Level, and Instrumentation Ratings of Recorded Performances (Standard Deviations in Parentheses)*

	Professional	All-State	Full Symphony	String Orchestra
Technique	8.86 (1.15)	7.04 (1.90)	8.17 (1.57)	7.73 (2.00)
Musicality	8.58 (1.31)	7.39 (1.63)	8.09 (1.32)	7.88 (1.83)
Overall	8.72 (1.24)	7.21 (1.77)	8.13 (1.45)	7.80 (1.92)

An examination of means revealed that participants assigned higher overall scores to professional ensemble recordings (M = 8.72, SD = 1.24) than all-state ensemble recordings (M = 7.21, SD = 1.77). Full symphony orchestra recordings were given slightly higher overall scores (M = 8.13, SD = 1.45) than string orchestra recordings (M = 7.80, SD = 1.92). Little difference was found when comparing technique (M = 7.95, SD = 1.81) and musicality (M = 7.98, SD = 1.59) overall scores. Participants who viewed musical scores (M = 7.99, SD = 1.66) while evaluating ensemble recordings gave slightly more favorable overall ratings than those who did not view musical scores (M = 7.94, SD = 1.75). Significant Pearson correlations were found between rating types (technique and musicality), r (280) = .75, $p < .01$. Correlation coefficients for the two instrumentations (string orchestra and full symphony orchestra) were not significant, r (280) = .03, $p > .05$.

Data were screened to verify that assumptions of the multivariate analysis of variance were met. A MANOVA was computed with the two rating types (technique and musicality) as the dependent variables. The analysis included one between-subjects variable (the viewing and non-viewing of the scores) and two within-subjects variables (the two performance levels and the two instrumentations). An alpha level of .01 was used for rejection of the null hypothesis in all statistical tests.

Significant multivariate main effects were found for performance level, F (2, 67) = 60.91, $p < .001$, partial η^2 = .65, and instrumentation, F (2, 67) = 8.09, $p < .001$, partial η^2 = .20. No significant multivariate main effect was found for score use. However, the multivariate interaction between performance level and instrumentation was significant, F (2, 67) = 46.58, $p < .001$, partial η^2 = .58. Subsequent univariate analysis revealed significant differences for performance level and instrumentation on both technique ratings, F (1, 68) = 45.35, $p < .001$, partial η^2 = .40, and musicality ratings, F (1, 68) = 90.68, $p < .001$, partial η^2 = .57. All other two- and three-way interactions were not significant.

The interaction between the performance level and instrumentation is shown in Figure 2. It can be seen that listener scores for the professional ensemble recordings were consistently higher than the all-state ensemble recordings. Figure 2 also illustrates that listener scores for the professional (M = 8.31, SD = 1.38) and all-state (M = 7.95, SD = 1.50) full symphony orchestra recordings were similar, but ratings for the professional string orchestra (M = 9.13, SD = .93) and all-state string orchestra (M = 6.48, SD = 1.72) recordings differed considerably.

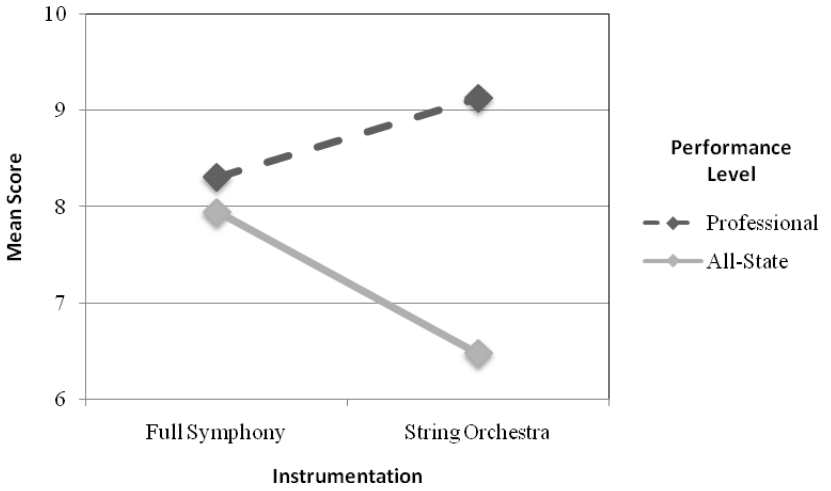

Figure 2. *Mean ratings for the two-way interaction between performance level and instrumentation.*

Discussion

The purpose of this study was to determine whether the use of a musical score, ensembles' performance level, and instrumentation would affect musicians' ratings of recorded orchestral excerpts. In contrast with previous studies (Napoles, 2009; Wapnick, Flowers, Alegant, & Jasinskas, 1993), score use did not affect participants' evaluations in this study. Since previous researchers discovered the use of musical scores influenced adjudicator's evaluations, it was interesting that no statistically significant differences were found in this study. Instrumentation differences may offer an explanation for the contradictory findings. Previous researchers investigating the effect of score use focused on the evaluations of choral ensembles and solo piano performances. However, the current study examined the influence of score use on adjudicators' evaluations of string only and full symphony orchestra performances. The dense textures in the music score may have adversely

influenced music majors' evaluations. With the expanded number of instrumental staves appearing on the score, participants may have found it difficult to accurately identify performance errors.

Supporting results from previous investigations (Byo & Brooks, 1994; Byo & Crone, 1989; Geringer & Johnson, 2007; Johnson & Geringer, 2007; Napoles, 2009), music majors in the present study assigned the professional ensembles' recordings higher scores than the all-state recordings. The present study expands previous research that compared the evaluations of high school and professional level performances by incorporating all-state ensembles (Geringer & Johnson, 2007; Johnson & Geringer, 2007; Napoles, 2009). The addition of high-level all-state recordings did not impact music majors' ability to discriminate between professional and amateur performances.

An examination of the interaction between rating type and the two performance levels revealed that music majors assigned higher scores to the professional ensemble recordings for both technique and musicality. The largest difference in participants' ratings of professional and all-state ensembles was revealed for technique. During live all-state recordings, listeners may have found it easier to identify concrete technical problems such as intonation, rhythm, articulation, and tone quality. However, identifying more subjective dimensions such as dynamics, phrasing, vibrato, and tempo changes may have been more difficult when assigning musicality ratings. Future researchers may wish to categorize evaluative statements to examine if rating types are evaluated differently at various performance levels.

In the present study, the full symphony orchestra recordings were assigned higher overall scores than string orchestra recordings. While prior investigations focused on the evaluations of solo and small ensemble performances (Bergee & Platt, 2003; Geringer & Madsen, 1998), the present investigation compared string and full orchestra performances. Similar to Geringer and Madsen (1998), music majors in this study gave more favorable scores to performances with larger instrumentations. Due to the limited number of existing studies and conflicting results, conclusions on instrumentations' effect on music majors' evaluations of music performance should be formed with caution. Future researchers may wish to expand this research area by examining evaluations of band, choral, and orchestra performances. Additional studies may help music educators understand the effect of instrumentation on adjudicators' evaluations.

With limited research on the potential effect of instrumentations on evaluations, past research on music majors' abilities to detect performance errors may provide insight on why full symphony orchestra performances in the present study received better ratings. Previous research indicates that error detection skills are less robust in response to polyphonic stimuli (Byo, 1993, 1997; Byo & Sheldon, 2000; Crowe, 1996; Sheldon, 1998, 2004). In addition, Hayslett (1992) and Huron (1989) revealed that listeners were able to detect more errors if they were located in the melodic or outer lines of a music score.

Due to the limited texture of only six instrumental lines occurring in the string orchestra excerpt (the "Prelude" from the *Concerto Grosso No.1 for Strings with Piano Obbligato* by Bloch), it may have been easier for participants to hear performance errors in the string orchestra recordings than the full symphony orchestra recordings that had 27 instrumental lines occurring at the same time ("Finale" from Tchaikovsky's *Symphony No. 4 in f minor, Op. 36*). With a wide array of instrumental timbres in the full symphony orchestra recordings, listeners may have been overwhelmed with the dense music texture and unable to clearly detect performance errors. While the full symphony orchestras' expanded instrumentation may have provided more potential for balance, intonation, rhythmic, dynamic, and tone quality problems, this makes errors less likely to be identified.

Higher ratings for full symphony orchestra recordings may have also occurred because listeners preferred the symphonic recordings' denser texture. Eighty percent of the participants in this study identified their primary instrument as a woodwind, brass, percussion, or string instrument. Since many of those participants' performance opportunities in the collegiate environment occur in wind ensembles and full symphony orchestras, they may prefer the mature, dense sound produced by symphonic ensembles to the sound of a string orchestra.

The interaction between performance level and instrumentation was enlightening. Participants rated the professional and all-state full symphony orchestra recordings similarly, but the professional and all-state string orchestra recordings differently. The disparity in ratings suggests that music majors had a more difficult task identifying the different ability levels in the densely textured full symphony orchestra recordings than the string orchestra recordings. When evaluating string orchestra recordings, it seems that listeners were able to clearly identify the professional musician's advanced technique over all-state musicians. It appears that technical flaws were more apparent to adjudicators in the all-state string orchestra's performance.

When examining the two rating types (technique and musicality) separately for each of the four recordings (professional string orchestra, professional full symphony orchestra, all-state string orchestra, and all-state full symphony orchestra), the all-state full symphony orchestra recording received a slightly more favorable musicality rating than the professional full symphony orchestra. Participants' written comments provided some indication that the all-state full symphony orchestra's higher musicality rating resulted from the more prevalent use and wider range of dynamics employed by the all-state conductor and musicians. Participants wrote the following anecdotal comments about the all-state full symphony orchestra recording: "dynamics were easily recognized"; "significantly more musical dynamics"; "more dynamic contrasts than C" (the professional full symphony orchestra recordings); and "a different interpretation, but certainly just as valid." In reference to the professional full

symphony orchestra recording, listeners wrote the following comments: "musicality rated lower because I could not hear aspects such as dynamic contrasts as well"; "gave a lower rating on musicality because there was little dynamic contrast or expressive elements"; and "needs more dynamic contrasts". Participants' comments may signify that the all-state full symphony orchestra's inclusion of dynamics not indicated in the original score revealed more "musicality" than the professional orchestra's (London Symphony Orchestra) performance that appeared to observe the printed dynamics.

Written comments provide limited insight into participants' musicality ratings, but offer another possible explanation for their evaluations. Music majors served as participants in the present investigation, and prior studies demonstrate that secondary, university, and professional level musicians' evaluations of music performance were not consistent (Fiske, 1977; Geringer, Madsen, & Dunnigan, 2001; Hewitt, 2002, 2005, 2007; Howard, 2009; Pope, 2011; Repp, 1996; Wapnick et al., 2005). Through their written comments, it seems that university level musicians in this study signified dynamics as an important component of musicality in their belief system. Nevertheless, as the young musicians mature through education and experience, they may focus on additional performance elements during evaluations. Additional research may identify specific music components that novice and experienced adjudicators focus on during the evaluation of musicality. Due to the limited amount of written comments provided by participants in this study, future researchers may consider investigations that analyze adjudicators' written comments. By examining multiple professional recordings of a single composition, researchers may identify specific performance characteristics that can guide less experienced musicians as they learn new repertoire.

A limitation to this study was the use of only one excerpt for each instrumentation and performance level (professional string orchestra, professional full symphony orchestra, all-state string orchestra, and all-state full symphony orchestra). To examine the possible main effects and interactions of score use, performance level, and instrumentation, the researcher was unable to employ additional recordings. Further research that includes additional recordings of string and full symphony orchestra repertoire at both performance levels may provide a better understanding of performance level and instrumentation's effect on adjudicators' evaluations. Additional recordings may also allow for the examination of other variables such as conductors' interpretations of the music, excerpt selection, stylistic characteristics, and other music-related factors.

More research is necessary to determine if instrumentation and performance level affect adjudicators' evaluations at adjudicated festivals. Future researchers may wish to focus on pre-service, novice, and experienced adjudicators' abilities to detect performance errors in various large ensembles textures. Replications of the current or suggested future studies could include choral, wind, brass, and percussion ensembles.

References

Bergee, M. J., & Platt, M. C. (2003). Influence of selected variables on solo and small-ensemble festival ratings. *Journal of Research in Music Education, 51*, 342-353. doi:10.2307/3345660

Byo, J. L. (1993). The influence of textural and timbral factors on the ability of music majors to detect performance errors. *Journal of Research in Music Education, 41*, 156-167. doi:10.2307/3345405

Byo, J. L. (1997). The effects of texture and number of parts on the ability of music majors to detect performance errors. *Journal of Research in Music Education, 45*, 51-66. doi:10.2307/3345465

Byo, J. L., & Brooks, R. (1994). A comparison of junior high musicians' and music educators' performance evaluations of instrumental music. *Contributions to Music Education, 21*, 26-38.

Byo, C. L., & Crone, L. J. (1989). Adjudication by nonmusicians: A comparison of professional and amateur performances. *Missouri Journal of Research in Music Education, 26*, 60-73.

Byo, J. L., & Sheldon, D. A. (2000). The effect of singing while listening on undergraduate music majors' ability to detect pitch and rhythm errors. *Journal of Band Research, 36*, 26-46.

Ciorba, C. R., & Smith, N. Y. (2009). Measurement of instrumental and vocal undergraduate juries using a multidimensional assessment rubric. *Journal of Research in Music Education, 57*, 5-15. doi:10.1177/0022429409333405

Crowe, D. R. (1996). Effects of score study style on beginning conductors error-detection abilities. *Journal of Research in Music Education, 44*, 160-171. doi:10.2307/3345668

Droe, K. L. (2012). The effect of the music score on educators' written comments. *Journal of Band Research, 47*, 1-10.

Fiske, H. E. (1977). Relationship of selected factors in trumpet performance adjudication reliability. *Journal of Research in Music Education, 25*, 256-263. doi: 10.2307/3345266

Geringer, J. M., & Johnson, C. M. (2007). Effects of excerpt duration, tempo, and performance level on musician's ratings of wind band performances. *Journal of Research in Music Education, 55*, 289-301. doi: 10.1177/0022429408317366

Geringer, J. M., & Madsen, C. K. (1998). Musicians' ratings of good versus bad vocal and string performances. *Journal of Research in Music Education, 46*, 522-534. doi:10.2307/3345348

Geringer, J. M., Madsen, C. K., & Dunnigan, P. (2001). Trumpet tone quality versus intonation revisited: Two extensions. *Bulletin of the Council for Research in Music Education, 148*, 65-76.

Hayslett, D. J. (1992, April). *The effect of directed focus on the peripheral hearing of undergraduate instrumental music majors.* Paper presented at the National Convention of the Music Educators National Conference, New Orleans.

Hewitt, M. P. (2002). Self-evaluation tendencies of junior high instrumentalists. *Journal of Research in Music Education, 50*, 215-226. doi:10.2307/3345799

Hewitt, M. P. (2005). Self-evaluation accuracy among high school and middle school instrumentalists. *Journal of Research in Music Education, 53*, 148-161. doi:10.2307/3345515

Hewitt, M. P. (2007). Influence of primary performance instrument and education level on music performance evaluation. *Journal of Research in Music Education, 55*, 18-30. doi:10.1177/002242940705500103

Howard, S. A. (2009). *The effect of selected non-musical factors on adjudicators' ratings of high school solo vocal performances* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (AAT 304940231)

Huron, D. (1989). Voice denumerability in polyphonic music of homogeneous timbres. *Music Perception: An Interdisciplinary Journal, 6*, 361-382. doi:10.2307/40285438

Johnson, C. M., & Geringer, J. M. (2007). Predicting music majors' overall ratings of wind band performances: elements of music. *Bulletin of the Council for Research in Music Education, 173*, 25-38.

Madsen, C. K., & Geringer, J. M. (1999). Comparison of good versus bad tone quality/intonation of vocal and string performances: Issues concerning measurement and reliability of the continuous response digital interface. *Bulletin of the Council for the Research in Music Education, 141*, 86-92.

Napoles, J. (2009). The effect of score use on musicians' ratings of choral performance. *Journal of Research in Music Education, 57*, 267-279. doi:10.1177/0022429409343423

Pope, D. A. (2011, February). *A Comparison of Preservice Band, Choral, and Orchestra Teachers' Evaluations of String Orchestras*. Poster session presented at the Northwest Music Educators National Conference, Bellevue, WA.

Repp, B. H. (1996). The art of inaccuracy: Why pianists' errors are difficult to hear. *Music Perception: An Interdisciplinary Journal, 14*, 161-183. doi:10.2307/40285716

Schleff, J. S. (1992). Critical judgments of undergraduate music education students in response to recorded music performances. *Contributions to Music Education, 19*, 60-74.

Sheldon, D. A. (1998). Effects of contextual sight-singing and aural skills training on error-detection abilities. *Journal of Research in Music Education, 46*, 384-395. doi:10.2307/3345550

Sheldon, D. A. (2004). Effects of multiple listenings on error-detection acuity in multivoice, multitimbral musical examples. *Journal of Research in Music Education, 52*, 102-115. doi:10.2307/3345433

Wapnick, J., Flowers, P., Alegant, M., & Jasinskas, L. (1993). Consistency in piano performance evaluations. *Journal of Research in Music Education, 41*, 282-292. doi:10.2307/3345504

Wapnick, J., Ryan, C., Campbell, L., Deek, P., Lemire, R., & Darrow, A. A. (2005). Effects of excerpt tempo and duration on musicians' ratings of high-level piano performances. *Journal of Research in Music Education, 53*, 162-176. doi:10.2307/3345516

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The Influence of Ensemble Performance History and Accomplishments on Large Ensemble Performance Ratings

Mark A. Belfast, Jr.
Florida State University

The purpose of this study was to investigate the influence of ensemble performance history and accomplishments on ratings by evaluators. The study sought to determine whether evaluators' ratings of an ensemble performance might be affected if the evaluators were provided with background information about the performing ensemble. The sample of 94 participants consisted of music and non-music majors at a university in the southeastern United States. Participants rated three different recordings of Gustav Holst's "Song of the Blacksmith" for five music performance characteristics in either an ensemble-information or a no-ensemble-information condition. Approximately half of the participants completed evaluation forms that included information on the performance history and accomplishments of each ensemble. The remainder of the participants evaluated the recordings without the benefit of that information. The results revealed a statistically significant interaction between label condition and ensemble performance. The Tokyo Kosei Wind Orchestra and Eastman Wind Ensemble were rated higher by the ensemble-information group than the no-ensemble-information group, while the Keystone Wind Ensemble was rated lower by the ensemble-information group than the no-ensemble-information group. Implications for ensemble performance assessments and recommendations for future research are discussed.

Music education researchers have identified several nonmusical factors that might affect evaluator's assessments of musical performances (McPherson & Thompson, 1998). These factors include the style of music being performed (VanWeelden, 2004; VanWeelden & McGee, 2007), the race of the conductor or performer (Elliott, 1995; Killian, 1990; McCrary, 1993; Morrison, 1998; VanWeelden, 2004; VanWeelden & McGee, 2007), and the dress and physical attractiveness of the performer (Griffiths, 2009; Ryan, Wapnick, Lacaille, & Darrow, 2006; Wapnick, Darrow, Kovacs, & Dalrymple, 1997). Although these nonmusical factors were identified independently, the differential effects rely upon evaluators' social and cultural expectations. These communications not only involve daily interactions among the mother, father, and child but also involve siblings when there are multiple children in a family.

Other music education researchers have investigated the effect of performer descriptions on evaluators' ratings. Cassidy and Sims (1991) found that evaluators provided with labels describing performer disabilities tended to give higher ratings than evaluators with no labels. They concluded that the difference in ratings may be due to a tendency of evaluators to have a positive attitude "toward the musical efforts of handicapped people" (p. 32). In a more recent study, Silvey (2009) found that high school band directors with large-group evaluation experience and members of a college wind ensemble rated performances labeled *Wind Ensemble* higher than performances labeled *Concert Band*. Similarly, Cavitt (2002) asked pre-service music teachers to evaluate performances they believed to be seventh grade trumpet performers. Cavitt dubbed each recording twice to create four stimulus tracks, and each track was paired with a written description of the performer's ability and effort. After reading the description and listening to the recording, participants rated each performance as very poor, poor, fair, good or excellent. The results showed labels had a significant effect on how the performances were evaluated. When evaluators heard performances labeled as low effort, they rated the performances lower.

In addition to Cavitt (2002), other music education researchers have found that details about performers could potentially bias adjudicators when they are unaware that they are evaluating the same recording (Elliott, 1995; Griffiths, 2009; Schultz, 1994). Sheldon (1994) asked two groups of high school students to listen to identical recordings of a band's performance. The groups were either told they would hear a dress rehearsal before a spring concert or a dress rehearsal before a state concert band contest. The results indicated the competitive performance received significantly higher ratings than the noncompetitive performance, despite the use of identical recordings. In a frequently cited study of expectation effects, Duerksen (1972) asked participants to evaluate two recordings of the same composition, but the participants were unaware they were listening to the same recording twice. A control group was asked to use the characteristics given on an evaluation sheet to rate the performances without any specific information about the performers. The experimental group was provided the same general instructions, but they were told that one performance was by an eminent professional musician, while the other was by a student. Both music and non-music majors rated what they believed to be a "student" performance significantly lower than that of a "professional" performance. Using a similar methodology, Radocy (1976) had participants compare recordings of a variety of ensembles. He provided subjects in an experimental group with reasons why hypothetical prior listeners preferred the recording of a more professional performer. Radocy found that evaluators' assessments of identical performances may be influenced by bogus information provided by an authority figure.

The availability and accuracy of performer information may result in distorting the objectivity of evaluators (Cavitt, 2002; Duerksen, 1972;

Radocy, 1976; Sheldon, 1994). However, no known research has focused on the effects of genuine information about instrumental ensembles and the corresponding effect on the objectivity of evaluators. The results of such studies may provide valuable information to the field of music education and assist with the development of alternative methods of evaluating musical performances. The purpose of this study was to investigate how knowledge of an ensemble's performance history and accomplishments might affect evaluators' ratings of the ensemble's performance.

Method

Participants (N = 94) for this study were music (n = 84) and non-music majors (n = 10) enrolled at a large university in the southeastern United States. In an attempt to obtain a diverse sample (i.e., students who differed in age, major, or level of musical expertise), three different college classes were selected to participate in the study. These classes included an introduction to winds and percussion course designed for choral music education majors with no instrumental music experience (n = 3), two guitar courses comprised of instrumental music education, music therapy and non-music majors (n = 13), and a concert band comprised of music and non-music majors (n = 78).

Procedure

A review of literature, and a search for an appropriate measurement tool, led to the development of researcher-designed evaluation forms (Appendices A and B). Similar to the forms used by Duerksen (1972) and Radocy (1976), the evaluation forms in this study allowed evaluators to assess several musical characteristics of multiple ensemble performances. Each form contained a brief section that collected demographic information concerning the participant's gender, major and level of study in school, followed by Likert-type scales similar to those used in previous investigations to evaluate music performance characteristics: tone quality, pitch accuracy, rhythmic accuracy, dynamic contrast and interpretation (Duerksen, 1972; Radocy, 1976). The scales ranged from 1 = *Poor* to 5 = *Superior*. Respondents also rated the overall quality of each performance by selecting one of five descriptors that corresponded with the rating scale: poor, fair, good, excellent or superior.

Two versions of the evaluation form were created. The no-ensemble-information version (Appendix A) identified the three performances as *Performance 1, Performance 2* and *Performance 3*. No additional information was given about each performance. In addition to a performance number, the ensemble-information version of the evaluation form (Appendix B) provided participants with a section containing each ensemble's name and a brief summary of its accolades. Summaries were compiled from ensemble websites

(Eastman Wind Ensemble, 2012; Tokyo Kosei Wind Orchestra, 2012) and compact disc liner notes (Keystone Wind Ensemble, 2001).

The entire third movement of Gustav Holst's *Second Suite in F*, "Song of the Blacksmith," was selected for evaluation because of its brevity (approximately 1 minute, 30 seconds) and its availability through commercial recordings. Three different recordings were selected. These included performances by the Eastman Wind Ensemble (Holst, 1911a, track 6), Keystone Wind Ensemble (Holst, 1911b, track 11), and the Tokyo Kosei Wind Orchestra (Holst, 1911c, track 8). Each ensemble was selected because it was recognized for performance excellence among professionals in the field of instrumental music education.

Upon completion of the evaluation form, the instrument was piloted in order to confirm the clarity of its items and instructions. The pilot sample consisted of undergraduate music and non-music majors (n = 15) enrolled in the same university, but who did not participate in the final administration of the study. No adjustments to the instrument were found to be necessary.

A partial counterbalancing procedure was used to control for order effect. The three different presentation orders were as follows: 1) Keystone Wind Ensemble, Tokyo Kosei Wind Orchestra and then the Eastman Wind Ensemble; 2) Tokyo Kosei Wind Orchestra, Eastman Wind Ensemble and then the Keystone Wind Ensemble; and 3) Eastman Wind Ensemble, Keystone Wind Ensemble and then the Tokyo Kosei Wind Orchestra. I imported each audio recording into Apple's *GarageBand* software, and I adjusted the master track volume such that each performance was approximately the same volume. Additionally, ten seconds of silence was placed after each performance. The final product was then mixed down into a single audio track and burned onto a compact disc. Two additional discs were created with different performance orders. The audio equipment used to play each disc included a Sony CDP-CE375 compact disc player, Sony STR-DH100 stereo receiver and JVC HEW1001-004 stereo speakers.

I distributed copies of the final evaluation form to students during the first or last five minutes of the aforementioned music classes. In each class, participants were seated in straight rows or arcs. Forms were distributed such that odd numbered rows completed the no-ensemble-information evaluation form, while even numbered rows received the ensemble-information evaluation form. A total of 51 students were in the ensemble-information group, and 43 students were in the no-ensemble-information group. Participants were told they would be evaluating three different performances of the same piece of music. They were asked to complete the demographic information at the top of the form as soon as they received it, and told that they could begin their evaluations as soon as each performance began. This procedure was used to more closely reflect the real-time evaluations conducted by adjudicators in the field who often record written and verbal evaluations while an ensemble is performing. It was intended to capture the evaluators' assessments in the moment rather than

requiring them to recall details about specific performance characteristics after the fact. At the conclusion of each presentation, all completed evaluation forms were collected for data analysis.

Results

To examine the influence of ensemble performance history and accomplishments on performance evaluations, a two-way analysis of variance (ANOVA) was computed. Evaluator condition (ensemble-information group or no-ensemble-information group) served as the between-subjects variable, and ensemble performance was the within-subjects variable. Mean scores for each performance were calculated and examined for significant differences between the two groups.

The main effect of evaluator condition was not significant, F (1, 92) = .51, $p > .05$; however, the results yielded a significant interaction between evaluator condition and ensemble performance F (2, 184) = 3.55, $p < .05$, $n_p^2 = .04$ (see Figure 1). The Tokyo Kosei Wind Orchestra was rated higher by the ensemble-information group (M = 3.98, SD = .60) than by the no-ensemble-information group (M = 3.80, SD = .77). The Eastman Wind Ensemble was also rated higher by the ensemble-information group (M = 4.21, SD = .53) than by the no-ensemble-information group (M = 4.03, SD = .61). Conversely, the Keystone Wind Ensemble was rated lower by the ensemble-information group (M = 4.12, SD = .55) than by the no-ensemble-information group (M = 4.29, SD = .62).

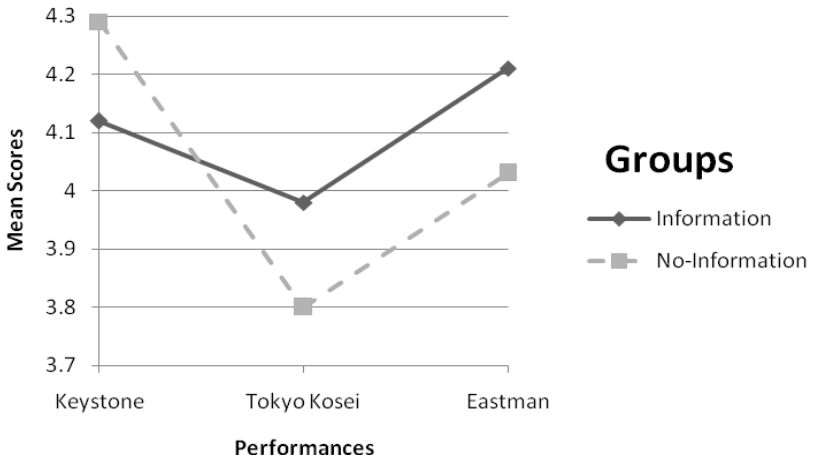

Figure 1. *Mean ensemble ratings by label condition and ensemble performance.* Groups were assigned to ensemble-information and no-ensemble-information conditions to evaluate recordings. Performances were assessed on a five-point rating scale.

Discussion

These results indicate music and nonmusic majors in this study may have been affected by knowledge of the history and accomplishments of a performing ensemble. This supports the findings of McPherson and Thompson (1998), who concluded that judges might develop an expectation of performance quality when they have previous knowledge of a performer's abilities. However, although the results yielded a significant interaction for the ensemble-information by performance effect, it should be noted there was a weak relationship between these two main effects. Knowledge of an ensemble's performance history and accomplishments may only have a minor effect on how evaluators rate a performance.

The purpose of the study was to examine the influence of ensemble performance history and accomplishments on performance evaluations. The similarity of recordings was only controlled minimally, because comparing different ensembles was not the intended focus. Although this was an extraneous variable, and a possible limitation of the study, the use of different recordings was intended to simulate the realistic listening experience of music festival adjudicators who often hear different interpretations of the same selection. Notably, the no-ensemble-information group rated the Keystone Wind Ensemble recording the highest. This may have been due to its superior recording quality. The clarity and resonance heard on the recording may have resulted in an increased aesthetic response to the Keystone performance. Evaluators in the no-ensemble-information group received no visual stimuli to distract their focus from the aural task; therefore, it is likely the sound of the high quality Keystone recording may have captured the focus of their attention.

The Eastman Wind Ensemble was rated higher than all other ensembles in the ensemble-information group. The particular Eastman recording used in the study was from the Mercury Living Presence series of monaural recordings created in the 1950s. Although the Eastman recording quality was not as good as the Keystone recording, it still received higher ratings from the ensemble-information group. This result has two important likely implications. First, the presentation of the Keystone label had a possible negative effect on its ratings. If participants were less familiar with the Keystone Wind Ensemble, they may not have been inclined to inflate their ratings for the group's performance. Secondly, the presence of a label might have had a greater effect on evaluators than the actual sound quality of the performances. Further research is necessary to investigate the robustness of these findings.

The Tokyo Kosei Wind Orchestra received the lowest ratings from both groups. This may have been caused by precision issues heard on the first note of the performance. The initial inaccuracy may have led evaluators to perceive the ensemble as inferior to the other two. Furthermore, although presentation order and performance volume were controlled, the Tokyo Kosei Wind Orchestra performance was noticeably slower (approximately 84 beats per minute)

than the other performances (approximately 100 beats per minute). It is certainly possible the difference in tempo had an effect on the judges' ratings. These results may be an indication of the validity of music performance assessments. Although evaluators can be affected by nonmusical factors (McPherson & Thompson, 1998), the purpose of evaluative procedures is to employ agreed upon criteria. The present study attempted to simulate realistic evaluation situations by pairing genuine ensemble information with actual ensemble performances. However, the dissimilar recordings used in this study were an extraneous variable, and it is unclear whether evaluation differences were caused by the inclusion of genuine information. Future research should employ procedures to minimize the possibility that individual performances may have an effect on the results, and performance assessment studies should utilize identical performances in order to control extraneous variables. Research should also be conducted that examines the effect of particular musical effects and errors on the accuracy and reliability of assessments.

Developing valid and reliable methods of assessment remains one of the most important issues challenging education today. Music education is not exempt from this challenge. This study examined the relationship between prior knowledge of an ensemble and evaluators' ratings. The results align with previous research that noted that the presence of descriptive labels may cause evaluators to develop an expectation of performance quality (Cassidy & Sims, 1991; Cavitt, 2002; Duerksen, 1972; Silvey, 2009). Future research might explore the use of anonymity during the evaluation of large ensemble performances and the effect on the quality and fairness of evaluation procedures. Additional research in the area of large ensemble performance evaluation certainly seems warranted.

References

Cassidy, J. W., & Sims, W. L. (1991). Effects of special education labels on peers' and adults' evaluations of a handicapped youth choir. *Journal of Research in Music Education, 39*, 23–34. doi:10.2307/3344606

Cavitt, M. E. (2002, February). *Differential expectation effects as factors in evaluations and feedback of musical performance.* Paper presented at the meeting of the Texas Music Educators Association, San Antonio, Texas.

Duerksen, G. L. (1972). Some effects of expectation on evaluation of recorded musical performance. *Journal of Research in Music Education, 20*, 268-272. doi: 10.2307/3344093

Eastman Wind Ensemble. (2012). *About the Eastman Wind Ensemble.* Retrieved from http://www.esm.rochester.edu/ewe/about.php

Elliott, C. A. (1995). Race and gender as factors in judgment of musical performance. *Bulletin of the Council for Research in Music Education,* 127, 50–56.

Griffiths, N. K. (2009). 'Posh music should equal posh dress': An investigation into the concert dress and physical appearance of female soloists. *Psychology of Music, 38,* 159-177. doi: 10.1177/0305735608100372

Holst, G. (1911a). Suite #2 in F for military band, op. 28, no. 2 [Recorded by the Eastman Wind Ensemble]. On *Fredrick Fennell conducts the Eastman Wind Ensemble* [CD]. New York: Mercury Living Presence. (1999)

Holst, G. (1911b). Second suite in F [Recorded by the Keystone Wind Ensemble]. On *Teaching music through performance in band vol. 1: Grade 4* [CD]. Chicago: GIA Publications. (2001)

Holst, G. (1911c). Second suite in F for military band [Recorded by the Tokyo Kosei Wind Orchestra]. On *Wind master series vol. 4: Suites* [CD]. Tokyo: Kosei Publishing. (1998)

Keystone Wind Ensemble (2001). Second suite in F for military band. In *Teaching music through performance in band vol. 1: Grade 4 [*CD]. Chicago: GIA Publications.

Killian, J. N. (1990). Effect of model characteristics on musical preference of junior high students. *Journal of Research in Music Education, 38,* 115–123. doi: 10.2307/3344931

McCrary, J. (1993). Effects of listeners' and performers' race on music preferences. *Journal of Research in Music Education, 41,* 200–211. doi: 10.2307/3345325

McPherson, G. E., & Thompson, W. F. (1998). Assessing music performance: Issues and influences. *Research Studies in Music Education, 10,* 12–24. doi: 10.1177/1321103X9801000102

Morrison, S. J. (1998). A comparison of preference responses of white and African-American students to musical versus musical/visual stimuli. *Journal of Research in Music Education, 46,* 208–222. doi: 10.2307/3345624

Radocy, R. E. (1976). Effects of authority figure biases on changing judgments of musical events. *Journal of Research in Music Education, 24,* 119–128. doi: 10.2307/3345155

Ryan, C., Wapnick, J., Lacaille, N., & Darrow, A. A. (2006). The effects of various physical characteristics of high-level performers on adjudicators' performance ratings. *Psychology of Music, 34,* 559–572. doi: 10.1177/0305735606068106

Schultz, J. (1994). *The influence of talent expectations and nature/nurture beliefs on evaluations of music student performances* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (UMI No. 9432575)

Sheldon, D. A. (1994). The effects of competitive versus noncompetitive performance goals on music students' ratings of band performances. *Bulletin of the Council for Research in Music Education, 121,* 29–41.

Silvey, B. A. (2009). The effects of band labels on evaluators' judgments of musical performance. *Update: Applications of Research in Music Education, 28,* 47–52. doi:10.1177/8755123309344111

Tokyo Kosei Wind Orchestra. (2012). *Profile.* Retrieved from http://www.tkwo.jp/english/profile

VanWeelden, K. (2004). Racially stereotyped music and conductor race: Perceptions of performance. *Bulletin of the Council for Research in Music Education, 160,* 38-48. doi: 10.2307/40319217

VanWeelden, K., & McGee, I. R. (2007). The influence of music style and conductor race on perceptions of ensemble and conductor performance. *International Journal of Music Education, 25,* 7–17. doi: 10.1177/0255761407074886

Wapnick, J., Darrow, A. A., Kovacs, J., & Dalrymple, L. (1997). Effects of physical attractiveness on evaluation of vocal performance. *Journal of Research in Music Education, 45,* 470–479. doi: 10.2307/3345540

Appendix A

Evaluation Form (no-ensemble-information)

Participation in this survey is voluntary and anonymous.

Circle your gender: Female | Male
Circle your major: Music Major | Non-music Major
Circle your level of study: Undergraduate | Graduate

Circle the number that best reflects your evaluation of each performance characteristic.

Performance 1	Poor	Fair	Good	Excellent	Superior
Tone Quality	1	2	3	4	5
Pitch Accuracy	1	2	3	4	5
Rhythmic Accuracy	1	2	3	4	5
Dynamic Contrast	1	2	3	4	5
Interpretation	1	2	3	4	5
Circle your overall rating of this ensemble's performance.	Poor	Fair	Good	Excellent	Superior

Performance 2	Poor	Fair	Good	Excellent	Superior
Tone Quality	1	2	3	4	5
Pitch Accuracy	1	2	3	4	5
Rhythmic Accuracy	1	2	3	4	5
Dynamic Contrast	1	2	3	4	5
Interpretation	1	2	3	4	5
Circle your overall rating of this ensemble's performance.	Poor	Fair	Good	Excellent	Superior

Performance 3	Poor	Fair	Good	Excellent	Superior
Tone Quality	1	2	3	4	5
Pitch Accuracy	1	2	3	4	5
Rhythmic Accuracy	1	2	3	4	5
Dynamic Contrast	1	2	3	4	5
Interpretation	1	2	3	4	5
Circle your overall rating of this ensemble's performance.	Poor	Fair	Good	Excellent	Superior

Appendix B

Evaluation Form (ensemble-information)

Participation in this survey is voluntary and anonymous.

Circle your gender: Female | Male
Circle your major: Music Major | Non-music Major
Circle your level of study: Undergraduate | Graduate

Circle the number that best reflects your evaluation of each performance characteristic.

Performance 1 - Keystone Wind Ensemble - Sponsored by Indiana University of Pennsylvania, the ensemble is comprised of 50 alumni, faculty, administrators and students of the university. Fanfare Magazine writes, "the group plays with precise intonation... [and is] able to tackle tricky rhythms and keep dense textures clear..."

	Poor	Fair	Good	Excellent	Superior
Tone Quality	1	2	3	4	5
Pitch Accuracy	1	2	3	4	5
Rhythmic Accuracy	1	2	3	4	5
Dynamic Contrast	1	2	3	4	5
Interpretation	1	2	3	4	5
Circle your overall rating of this ensemble's performance.	Poor	Fair	Good	Excellent	Superior

Performance 2 - Tokyo Kosei Wind Orchestra - Established in 1960, the ensemble is now internationally recognized as one of the world's most accomplished wind orchestras. It has performed concerts across the globe and released more than 300 commercial recordings of wind band music.

	Poor	Fair	Good	Excellent	Superior
Tone Quality	1	2	3	4	5
Pitch Accuracy	1	2	3	4	5
Rhythmic Accuracy	1	2	3	4	5
Dynamic Contrast	1	2	3	4	5
Interpretation	1	2	3	4	5
Circle your overall rating of this ensemble's performance.	Poor	Fair	Good	Excellent	Superior

Performance 3 - Eastman Wind Ensemble - Founded by Frederick Fennell in 1952, the ensemble became known as the pioneering force in the symphonic wind band movement. It has premiered more than 150 new works, and the album *Carnaval*, a collaboration with Wynton Marsalis, was nominated for a Grammy award.

	Poor	Fair	Good	Excellent	Superior
Tone Quality	1	2	3	4	5
Pitch Accuracy	1	2	3	4	5
Rhythmic Accuracy	1	2	3	4	5
Dynamic Contrast	1	2	3	4	5
Interpretation	1	2	3	4	5
Circle your overall rating of this ensemble's performance.	Poor	Fair	Good	Excellent	Superior

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The Effect of Skill Level on Instrumentalists' Perceptions of Flow

Anna K. Waite
Independent Researcher – Eugene, Oregon

Frank M. Diaz
University of Oregon

Many studies have focused on improving instrumentalists' practice routines for the purposes of improving efficiency and productivity. However, there appear to be no studies that have addressed how practice might be altered to enhance musicians' sense of enjoyment. This study investigated whether dimensions of flow could be experienced during individual instrumental practice, if general ability level influenced these experiences, and if on-task practice behaviors were related to the occurrence of flow experiences. Volunteer participants (N = 20) were instrumentalists majoring in music at a large university. Participants were members of an entry level ensemble (n = 8) and advanced ensembles (n = 12). Participants video recorded three, 30-minute practice sessions. At the end of each practice session, participants completed a questionnaire focused on perceived aspects of the practice experience that included skill, challenge, playfulness, concentration, control and enjoyment. Video recordings were analyzed for on-task and off-task behaviors. Findings indicated that students of different ability levels varied in their perceptions of skill, but not in other dimensions of the flow experience. Additionally, advanced students seemed to be less "on-task" during practice when compared with less advanced peers.

Studies of young instrumentalists suggest that effective and efficient practice strategies are linked to improvement in musical performance (Duke, Simmons & Cash, 2009; Miksza, 2007; Pitts, Davidson, & McPherson, 2000). For example, Miksza (2007) found that instrumentalists' self-evaluation of practice efficiency was strongly related to observations of performance quality. Similarly, Duke, Simmons, and Cash (2009) observed that the efficiency of strategies used during practice were more determinative of performance quality than the length of time spent in practice. Researchers have concluded that effective practice strategies lead to better performances, resulting in increased perseverance among young musicians (Pitts, Davidson & McPherson, 2000).

Attitudes and expectations for practicing music vary widely (Kostka, 2002). Kostka found that students are taught a number of effective practice techniques, but may not use these techniques in their own practice. Students, who utilize sequentially structured behaviors, such as stopping to correct a section or jumping to challenging sections, gain the most from personal

practice (Rohwer & Polk, 2006). Hidi and Harackiewicz (2000) argue that students' practice behaviors are partially dependent on their disposition toward goal-directed behavior, either a task (mastery) goal orientation or an ability (performance, ego) goal orientation. These goal orientations, influenced by self-concept and intrinsic motivation, are also related to performance and effort (Schmidt, 2005). In general, findings indicate that students who utilize specific practice techniques and spend more time practicing tend to have a task or goal orientation.

Though knowledge of specific practice strategies can lead to effective practice, several researchers have found inconsistencies in their application. For example, in a structured and supervised environment, volunteer eighth grade instrumentalists participated in an individual practice session and were asked to verbalize their practice techniques (Rohwer & Polk, 2006). Many students never used the techniques that they verbalized, but for those that did**,** there were noticeable improvements in performance. In a similar study, novice band students reported familiarity with a variety of common practice strategies, but did not apply these strategies in their appropriate contexts (Oare, 2012). Moreover, the application of strategies might be dependent on the ability to set individual goals, a relationship explored by Miksza (2006) and Miksza, Prichard, and Sorbo (2012) in studies on impulsivity. In both studies, students who were less impulsive tended to outperform their more impulsive counterparts. Based on these findings, it appears that structuring practice, along with goal setting and self-evaluation leads musicians to use known strategies, resulting in improved performance achievement.

Musicians tend to attribute success and failure to either talent or effort, factors that have been investigated among studies focusing on the concept of "locus of control". Madsen and Goins (2002) define locus of control as the perception of a connection between one's action and its consequences. Environment and background seem to play a large role in students' perceptions of locus of control and corresponding practice behaviors. Asmus (1985) found that students from a parochial school attributed success or failure to ability, inner city students attributed success or failure to effort, and suburban students evenly assigned ability and effort as causes of success and failure. Student perception of success or failure using self-evaluations of practice efficiency was highly correlated with performance achievement in a study by Miksza (2007). Students adopting a task goal orientation focused and prioritized improving and developing new skills. Conversely, students who focused on the speed of learning tasks were less likely to adopt mastery goals and more likely to adopt performance-avoidance goals (Bråten & Strømsø, 2004). Consequently, beliefs about success and failure might be central to motivation for and the approach to particular outcomes.

Motivation is inspired intrinsically or extrinsically and affects the way in which an individual approaches practice goals (Diaz, 2010). Nielsen (2008) found that the use of learning strategies was associated with a "task goal"

orientation, meaning that learners practiced to achieve particular musical outcomes and attain recognition as a better player. McPherson and McCormick (1999) found that musicians who concentrated on playing by ear and improvising, working on new, unlearned pieces or older familiar pieces and warm-up routines with scales/arpeggios, etudes and sight-reading were more cognitively engaged while practicing, and expressed more intrinsic interest in learning their instrument. Generally, practice time was highly correlated with self-assigned ratings of intrinsic motivation, which was closely related to performance and effort (Schmidt, 2005).

Musicians who are intrinsically motivated, and who express more interest in learning their instrument, might be more likely to experience peak experiences during individual practice. Peak experiences are intense states of happiness and well being that occur during tasks that are valued for its own sake such as music making and rock climbing (Csikszentmihalyi, 1990; Maslow, 1998). The peak experience known as "flow" provides a useful medium to systematically study the motivation of practice.

Flow

The theory of flow describes the condition in which a person feels completely immersed and successful while engaging in a specific task or activity (Csikszentmihalyi, 1990). There are three common experiences related to flow: absorption (total concentration), enjoyment, and intrinsic motivation (Nakamura & Csikszentmihalyi, 2002). Novak, Hoffman, and Yung (1998) describe a series of conceptual models of flow including Hoffman and Novak's (1996) proposal that "to experience flow while engaged in an activity, consumers must perceive a balance between their skills and the challenges of the activity, and both their skills and challenges must be above a critical threshold" (p. 55). This balance of skills and challenges is a key component of the "play" experience, which shares similar characteristics to flow (Csikszentmihalyi, 1971). Aspects of play, such as informal practice, have also been associated with improvements in performance skills (Sloboda, Davidson, Howe, & Moore, 1996).

Factors such as performance feedback, clear rules, and a sense of autonomy contribute to a person's perception of the necessary balance of skills and challenges (Bakker, 2003), and these factors have been investigated in the context of sports, games, computers, and music. Games of skill, strategy and chance share structural characteristics that maximize the play experience and provide a model for investigating flow (Csikszentmihalyi, 1971). Flow is more robust during highly structured activities (e.g. work) rather than in less structured or leisure environments (Csikszentmihayli & LeFevre, 1989). The skills and challenges involved in structured practice provide an objective framework for investigating flow, and this could be beneficial for music

educators seeking to inspire a more enjoyable learning experience for their students.

Music education researchers have explored the antecedents of flow in musical activities. “Comparisons of experience between specific musical events showed activities characterized by multi-sensory involvement, unambiguous feedback, and perceived opportunities for action facilitated the most flow” (Custodero, 1997**,** p. 1). In music camp activities, Diaz and Silveira (2012) found that flow was common in a large range of musical and academic activities, and that the highest ranking, flow-inducing activities were related to self-perceptions of attention and enjoyment.

Flow experiences are more likely to occur during rehearsal periods that involve extended performance activity and few rehearsal stops. Additionally, the occurrence of flow in rehearsals is dependent on the ability of others in the group and relies on each individual’s personal goals and challenges (Kraus, 2003). Sutton (2004) interviewed members of professional and advanced musical ensembles regarding collective experiences of flow. They described themes of preparation, submergence of ego, trust, role of audience, and the genuine desire to share music for a worthwhile purpose. Kraus’ and Sutton’s successful finding of flow in the instrumental ensemble setting suggests that studies of flow may be applied to individual practice sessions.

Flow is defined by commonly recognized antecedents, experiences, and consequents (Nakamura & Csikszentmihalyi, 2002; Hoffman & Novak, 1996); however, a useable and reliable conceptual definition remains elusive. In a study of flow in computer-mediated environments, Novak, Hoffman, and Yung (1998) compiled 16 definitions for the term. This diverse list of definitions led the authors to conclude that "one is not left with a central definition of flow, but [rather] a wide variety of constructs which may be experienced [when one experiences flow]" (p. 1). They propose that a conceptual definition of flow account for the experiences of flow (ex. intrinsic enjoyment, loss of self-consciousness), correlates of the experience (ex. playfulness, enjoyment), antecedents (skills, challenges), and consequents (ex. positive affect, a sense of control) (Novak, Hoffman, and Yung, 1998).

Extant research describes achievement in practicing performance, but does not examine developing musical enjoyment through personal practice (Miksza, 2007; Duke, Simmons, & Cash, 2009). If students are to continue with music throughout their lives, it seems important to discover a way to implement solitary satisfaction. Flow theory has been applied to musical activities, and has been found to occur in ensemble settings, but has not been thoroughly studied within individual practice settings. Requiring a balance between skills and challenge, flow experiences may be induced through structured practice. Diaz and Silveira (2012) suggest that future studies examine beneficial strategies “to create and sustain flow experiences during individual practice sessions” (p. 12).

Since current studies do not address applying the study of flow to practice strategies, research in this area would be beneficial to music educators hoping to inspire motivation in their students and instrumentalists looking for enjoyment in their own practice.

Research Questions

The purpose of this study was to investigate occurrences of flow in individual instrumental practice. The study addressed the following research questions: (a) Are flow-related constructs of perceived balance between skills and challenges, playfulness, enjoyment, and perceived control replicable in individual instrumental settings? Specifically, does flow offer a theoretical framework that can be applied in examining motivation during individual practice sessions? (b) Do college level instrumentalists report flow during individual practice, and if so, what dimensions are reported? (c) How do instrumentalists' reports regarding dimensions of the flow experience differ based on musical skill level? (d) Is there a relationship between frequency of on-task practice behaviors and musicians' self-reported experiences of flow during instrumental practice sessions?

Method

Data were collected from undergraduate music majors practicing their instruments as part of studio, ensemble, and private lesson requirements. To allow for differentiated skill levels, participants were recruited from ensembles in which musical ability during auditions was a determining factor for placement in an entry level ensemble (Symphonic Band, $n = 8$); and two advanced level ensembles (Wind Ensemble and Orchestra, $n = 12$). Participants in the study ($N = 20$) included performance majors ($n = 8$), music education majors ($n = 11$), and a double major in education and performance ($n = 1$). There were four graduate students and 16 undergraduates, with all graduate students in their first year of study and most undergraduates in their third year ($M = 2.81$). Nine participants were female, and 11 were male.

As suggested by Novak, Hoffman, and Yung (1998), conceptual definitions of flow should account for correlates of the experience (playfulness, enjoyment), its antecedents (skills, challenges), and its potential consequents (positive affect, a sense of control). Of the list of 16 definitions provided by Novak, Hoffman, and Yung (1998), we adopted the framework of Ghani, Supnick, and Rooney (1991) based on these criteria. Consequently**,** flow in this study was defined as (a) total concentration on an activity and the enjoyment which one derives from an activity; (b) a balance between the challenges perceived in a given situation and the skills a person brings to it, and (c) a sense of control over one's environment. Following this framework, questionnaire items were adapted from Novak, Hoffman, and Yung (1998) and Ghani and Deshpande (1993).

Selected questions addressed dimensions of the flow experience including students' perceptions of skill, challenge, playfulness, enjoyment, concentration, and perceived control. Items selected for the questionnaire included constructs that yielded minimal Cronbach alpha ratings of .75. (See Table 1 for a list of the items by construct.)

Table 1. *Questionnaire Items by Construct*

Construct	Question
Skill	I am very skilled at my instrument.
	I consider myself knowledgeable about good practice techniques on my instrument.
	I know less about playing my instrument than most in my studio.
	I know how to figure out passages I want to learn on my instrument.
Challenge	Practicing my instrument challenges me.
	Practicing my instrument challenges me to perform to the best of my ability.
	Practicing my instrument provides a good test of my skills.
	I find that practicing my instrument stretches my capabilities to the limits.
Playfulness	I feel unimaginative when I practice my instrument.
	I feel flexible when I practice my instrument.
	I feel unoriginal when I practice my instrument.
	I feel uninventive when I practice my instrument.
Concentration	I am deeply engrossed when practicing my instrument.
	I do not fully concentrate when practicing my instrument.
	My attention is focused when practicing my instrument.
	I am absorbed intensely when practicing my instrument.
Enjoyment	Practicing my instrument is enjoyable.
	Practicing my instrument is exciting.
	I am uninterested when practicing my instrument.
	Practicing my instrument is fun.
Control	I feel agitated when practicing my instrument.
	I feel calm when practicing my instrument.
	I feel in control when practicing my instrument.
	I feel confused about what to practice.

Note. Questionnaire items were adapted from Yung (1997) and Ghani and Deshpande (1993), rewritten to reflect contexts involving instrumental practice. Selected questions addressed dimensions of the flow experience including students' perceptions of skill, challenge, playfulness, enjoyment, concentration, and perceived control.

Participants video recorded themselves during three half-hour practice sessions, the first of which served as a training and acclimation session for the study's video taping, monitoring, and questionnaire procedures. At the end of each half-hour practice session, participants completed the flow related questionnaire, and provided demographic information on gender, instrument, number of years in degree program, and major.

Results

Raw data consisted of Likert-type responses (1 = strongly disagree to 5 = strongly agree) for questionnaire items related to the selected flow constructs. Responses to negatively phrased questions were inverted for uniform comparisons with other items. To determine test-retest reliability on survey questions across the three practice sessions, intraclass correlation coefficients were calculated for each construct. These were calculated using a two-way random effect model based on absolute agreements between trials. Calculated values for each construct were: skill (.939), challenge (.860), play (.924), control (.826), concentration (.774), and enjoyment (.829). The selected constructs had been subjected previously to multi-dimensional scaling, and because internal consistency was adequate, no further attempt to separate constructs was attempted.

To determine the suitability of each construct for further analysis, Cronbach's alpha was calculated for each construct by trial. The analysis yielded acceptable values (> .70) for all trials in respect to skill, challenge, and enjoyment. For the constructs of play and concentration, two questionnaire items were dropped in order to yield adequate reliability for further analysis. Questionnaire items dropped include question 12 for playfulness and question 9 for concentration. Due to low levels of reliability, the construct of control was removed from further analyses.

Six independent sample *t* tests were used to compare means for each flow dimension construct by musical ability grouping. Results yielded no significant differences between musical ability groups except for the skill construct, $t(18) = 3.08$, $p < .05$. Descriptive statistics for all six flow constructs are provided in Table 2.

Table 2. *Summary and Distribution of Responses across Trials by Flow construct and Ensemble Level (N=20)*

Flow Construct	Ensemble Placement	*n*	*M*	*SD*	Sk	Kur
Skill*	L	8	3.68	0.77	-0.71	0.44
	U	12	4.48	0.39	0.21	-1.91
Challenge	L	8	4.38	0.55	-0.33	-1.52
	U	12	4.02	0.5	-1.64	-0.77
Playfulness	L	8	3.92	0.62	-0.5	-0.37
	U	12	4.2	0.67	-0.53	-1.05
Concentration	L	8	3.89	0.23	-0.3	0.17
	U	12	3.89	0.54	0.99	0.67
Enjoyment	L	8	4.17	0.56	-0.9	1.11
	U	12	4.4	0.57	-0.88	-0.54

Note. Abbreviations *M* (Mean) *SD* (Standard Deviation) Sk (Skewness), Kur (Kurtosis) L (lower) U (upper). *Denotes significant difference at $\alpha<.05$

Practice sessions were observed and coded as on-task or off-task using the software program, Scribe (Duke & Stammen, 2011). For this study, on-task behavior was defined as any activity directly relating to a musical task or outcome (e.g. playing the instrument, marking or studying the music, listening or playing along with a recording, adjusting the instrument including reeds, singing, purposeful breathing). Activities that did not relate to a musical outcome were labeled as off-task and included behaviors such as checking a cell phone, staring into space, drinking water, leaving the practice room, talking to friends, and stretching. Activities associated with on and off task categories were determined using an inductive approach (Strauss & Corbin, 1998). The authors independently coded behaviors observed in participants' videos and then collaborated to resolve any differences in the coding. After coding was agreed upon, the first author coded all videos based on the resulting categories. Following the initial coding procedure, 20% of the videos were randomly selected for coding by a trained assistant with previous Scribe software experience to check for inter-rater reliability which was found to be .86.

Although three practice sessions were recorded, data from the first practice session were omitted from analyses to allow for participants sensitizing to the study procedures. Table 3 shows results of on-task versus off-task time usage by the two musical ability groups. The average on-task behavior of students in symphonic band (95%) was slightly higher than that of students in wind ensemble or symphony (92%).

Table 3. *On- and Off-Task Time by Ensemble Placement*

Trial	Ensemble[a]	On-Task		Off-Task	
		%	time	%	time
2	U	92.97	29:25.7	6.56	02:03.9
	L	96.3	28:45.8	3.11	00:54.3
3	U	92.03	28:04.9	7.24	02:10.8
	L	94.29	28:31.5	5.15	01:32.1

Note. Time was calculated by analyzing self-recorded videos for behaviors using the Scribe software (*N*=20).
[a] L (Lower) U (Upper)

Discussion

Results indicate that constructs related to the flow experience (challenge, playfulness, concentration, enjoyment, and skill) seem robust enough to garner acceptable levels of internal consistency and reliability across two trials of individual instrumental music practice. This result is notable, as it suggests an additional method of examining motivation in individual music practice settings. Additionally, findings suggested no difference between participants as a function of musical ability in any of the flow constructs other than skill.

Despite participants' perceptions of skill, or ability level as defined by ensemble placement, general findings indicate that other flow-related constructs were potentially attainable. Further, results indicated high percentages of on-task practice time as well as generally high ratings for all flow constructs investigated in the present study.

Researchers across a variety of content areas have concluded that efficient, goal-oriented practice produces the best performance results (Hidi & Harackiewicz, 2000). Beginning instrumentalists require specific training on effective practice techniques. When success is achieved too quickly, however, students might be less inclined to develop a task goal orientation, one indicator of intrinsic motivation. While efficient practice is important for the advancing musician, motivation may be a more important goal in the development of the young instrumentalist. This might be more successfully accomplished through intrinsic enjoyment of practice rather than through efficient practice.

Flow theory can provide a valuable means for examining motivation during individual instrumental practice. This may offer a framework for examining aspects of motivation**,** including perceptions of skills and challenges and how these might lead to feelings of control and concentration. Flow also considers enjoyment, specifically enjoyment through concentrated and goal-directed activity, an aspect not often addressed in similar frameworks. The possibility that goal-directed activity can be both productive and enjoyable, and that it can be examined empirically, seems promising to the ends of engendering lifelong participation in music. At a minimum, helping students design practice sessions that are both productive and enjoyable is a worthwhile endeavor for music educators.

Similar to the results of studies by Miksza (2007), and Duke, Simmons, and Cash (2009), the results of this study revealed no specific relationships between practice time and performance level. Regardless of participants' ensemble placement, which might serve as an indicator of performance level, average percentage of time on-task was almost identical for the two groups. This reinforces previous findings indicating that efficiency of practice is more indicative of performance level than the amount of practice (Duke, Simmons, & Cash, 2009; Miksza 2007). These results must be observed with caution, as it is quite possible that there was very little difference in ability level solely based on ensemble placement and acceptance to the university as music majors, at least among this particular group of participants.

Of particular interest in this study is the finding suggesting no statistically meaningful relationship between play and enjoyment. Although the construct of skill accurately reflected the level of students' ensemble placement, this did not seem to significantly affect their perceptions on play and enjoyment. Perhaps, ability level might not play a determinative role on the potential for peak experiences during individual practice. This result might be an artifact of the experimental task, as it is possible that participants were more engaged because they were required to complete a questionnaire at the conclusion of each

session. Similar to Bakker's findings (2003), this engagement and focus may have led to higher ratings on the self-report of flow constructs. Perhaps because it is not a trait and it is unstable as a state, concentration was the item with the lowest intraclass correlation in this study. Several participants reported more effective practice because they were being video recorded, perhaps resulting in a state of higher concentration. Although recording themselves was not excessively difficult or intrusive, the authors posit that the study procedures may not reflect routine practice procedures.

As ratings for skills and challenges were relatively balanced, and perceptions of playfulness and enjoyment were notably high, it seems reasonable to assume that participants experienced flow during the study. Additionally, the presence of the study's timed practice sessions and self-reflective questionnaires may have facilitated other flow-related antecedents, such as structure and feedback (Bakker, 2003). For music educators, these findings suggest that practice sessions might be structured to promote flow. To balance skills and challenges, music educators could assist their students in articulating challenging yet attainable goals, and in developing self-assessments as a form of feedback. These strategies could serve to improve the efficiency of practice sessions while simultaneously promoting flow, especially among students who have difficulty in assessing the difficulty of particular outcomes or who have inaccurate perceptions of their own capacities. Additionally, the process of having partial control over goals and assessments allows students some degree of personal autonomy, which has been identified in some studies as important in promoting flow (Bakker, 2003). Students might also be encouraged to experiment or "play" with different types of practice approaches, which can improve performance, self-direction and autonomy (Sloboda, Davidson, Howe, & Moore, 1996).

Due to the small sample size consisting of volunteer music majors, this study should be generalized conservatively. Future studies could provide a more comprehensive picture of the population of students involved in instrumental music by including participants of various ages ranging from middle school through collegiate levels, and with varying interest and dedication to practicing their instrument. Although only on- and off-task behaviors were coded, further work might be done to code specific practice techniques. Finally, occurrences of flow might be more successfully ascertained by survey questions asking participants directly to report whether they experienced a peak experience and if they had set specific goals.

References

Asmus, E. (1985). Sixth graders' achievement motivation: Their views of success and failure in music. *Bulletin of the Council for Research in Music Education, 85*, 1-13.

Bakker, A. B. (2003). Flow among music teachers and their students: The crossover of peak experiences. *Journal of Vocational Behavior, 66*, 26-44. doi: http://dx.doi.org/10.1016/j.jvb.2003.11.001

Bråten, I. & Strømsø, H. I. (2004). Epistemological beliefs and implicit theories of intelligence as predictors of achievement goals. *Contemporary Educational Psychology, 29*, 371-88. doi: http://dx.doi.org/10.1016/j.cedpsych.2003.10.001

Christensen, S. (2010). Practicing strategically: The difference between knowledge and action in two eighth-grade students' independent instrumental practice. *Update: Applications of Research in Music Education, 29*, 22-32. doi:10.1177/8755123310377924

Csikszentmihalyi, M. (1971). An exploratory model of play. *American Anthropologist, New Series,73*, 45-58. doi: 10.1525/aa.1971.73.1.02a00040

Csikszentmihalyi, M. & LeFevre, J. (1989). Optimal experience in work and leisure. *Journal of Personality and Social Psychology, 56*, 815-822. doi: 10.1037/0022-3514.56.5.815

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper and Row.

Custodero, L. A. (1997). *An observational study of flow experience in young children's music learning.* (Unpublished doctoral dissertation). Retrieved from Proquest Dissertations and Theses. (UMI 9835142)

Diaz, F. M. (2010). Intrinsic and extrinsic motivation among collegiate instrumentalists. *Contributions to Music Education, 37,* 23-35.

Diaz, F. M. & Silveira, J. (2012). Dimensions of flow in academic and social activities among summer music camp participants. *International Journal of Music Education*. doi: 10.1177/0255761411434455

Duke, R. A., Simmons, A. L., & Cash, C. D. (2009). It's not how much; It's how: Characteristics of practice behavior and retention of performance skills. *Journal of Research in Music Education, 56*, 310-321. doi:10.1177/0022429408328851

Duke, R. A. & Stammen, D. (2011). Scribe (Version 4.2) [computer software]. Available from https://gumroad.com/learningandbehavior#fyzi

Ghani, J. A. & Deshpande, S. P. (1993). Task characteristics and the experience of optimal flow in human-computer interaction. *The Journal of Psychology 128*. 381-391. doi: 10.1080/00223980.1994.9712742

Ghani, J. A., Supnick, R., & Rooney, P. (1991). The experience of flow in computer-mediated and in face-to-face groups. *Proceedings of the Twelfth International Conference on Information Systems*, DeGross, J.I.; Benbasat, I.; DeSanctis, G.; & Beath, C.M. Eds., New York, New York, December 16-18.

Hidi, S. & Harackiewicz, J. M. (2000). Motivating the academically unmotivated: A critical issue for the 21st century. *Review of Educational Research 70,* 151-79. doi:10.3102/00346543070002151

Hoffman, D. L. & Novak, T. P. (1996). Marketing in hypermedia computer-mediated environments: Conceptual foundations. *Journal of Marketing, 60* (3), 50-68.

Kostka, M. J. (2002). Practice expectations and attitudes: A survey of college-level music teachers and students. *Journal of Research in Music Education, 50*, 145-154. doi: 10.2307/3345818

Kraus, B. N. (2003). *Musicians in flow: Optimal experience in the wind ensemble rehearsal.* PhD dissertation, Arizona State University. Tempe: Retrieved from Proquest Dissertations and Theses. (UMI 3084646)

Madsen, C. K. & Goins, W. E. (2002). Internal versus external locus of control: An analysis of music populations. *Journal of Music Therapy, 39*, 265-273.

Maslow, A. H. (1968). *Toward a psychology of being*. New York: Van Nostrand Reinhold Company.

McPherson, G. E. & McCormick, J. (1999). Motivational and self-regulated learning components of musical practice. *Bulletin of the Council for Research in Music Education, 141*, 98-102.

Miksza, P. (2006). Relationships among impulsiveness, locus of control, sex, and music practice. *Journal of Research in Music Education, 54*, 308-323. doi: 10.1177/002242940605400404

Miksza, P. (2007). Effective practice: An investigation of observed practice behaviors, self-reported practice habits, and the performance achievement of high school wind players. *Journal of Research in Music Education, 55*, 359-375. doi: 10.1177/0022429408317513

Miksza, P., Prichard, S., & Sorbo, D. (2012). An observational study of intermediate band students' self-regulated practice behavior. *Journal of Research in Music Education, 60*, 254-266. doi: 10.1177/0022429412455201

Nakamura, J. & Csikszentmihalyi, M. (2002). The concept of flow. In C. R. Snyder & S. J. Lopez, (Eds.), *Handbook of Positive Psychology* (pp. 89–105). London: Oxford University Press.

Nielsen, S. (2008). Achievement goals, learning strategies and instrumental performance. *Music Education Research, 10*, 235-247. doi: 10.1080/14613800802079106

Novak, T. P., Hoffman, D. L., & Yung, Y. F. (1998). Modeling the structure of the flow experience among web users. In *INFORMS Marketing Science and the Internet Mini-Conference*. doi: 10.1.1.195.1338

Oare, S. (2012). Decisions made in the practice room: A qualitative study of middle school students' thought processes while practicing. *Update: Applications of Research in Music Education*. *30*, 63-70. doi: 10.1177/8755123312437051

Pitts, S., Davidson, J., & McPherson, G. (2000). Models of success and failure in instrumental learning: Case studies of young players in the first 20 months of learning. *Bulletin of the Council for Research in Music Education. 146,* 51-69.

Rohwer, D. & Polk, J. (2006). Practice behaviors of eighth-grade instrumental musicians. *Journal of Research in Music Education, 54*, 350-362. doi: 10.1177/002242940605400407

Schmidt, C. P. (2005). Relations among motivation, performance achievement, and music experience variables in secondary instrumental music students. *Journal of Research in Music Education, 53*, 134-147. doi: 10.1177/002242940505300204

Sloboda, J. A., Davidson, J. W., Howe, M. J. A., & Moore, D. G. (1996). The role of practice on the development of performing musicians. *British Journal of Psychology, 87*, 287-309. doi: 10.1111/j.2044-8295.1996.tb02591.x

Strauss, A. L. & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing Grounded Theory* (2nd ed.). Thousand Oaks, CA: Sage.

Sutton, R. C. (2004). *Peak performance of groups: An examination of the phenomenon in musical groups.* Available from ProQuest Dissertations and Theses database. (UMI 3150594)

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Preparing Children and their Parents for String Lessons

Eugenia Costa-Giomi
University of Texas – Austin

Genevieve Frisch
Independent Researcher – Austin, Texas

The purpose of this study was to evaluate parents' observations of their children's musical behaviors during an introductory music class for 3 to 5-year-olds waiting to enter a Suzuki string program. A secondary purpose was to determine whether the class was of value to participating families. At the end of the six-week class, parents completed an exit questionnaire. All lessons were videotaped to assess the accuracy of parents' observations. The weekly group lessons familiarized children and parents with the instruments, skills, and repertoire of the string program. The class provided parents with opportunities to observe specific musical behaviors of their children and suggestions for the continuation of music play and music learning at home. Parents' observations about their children's musical behaviors were accurate and precise. All children and parents reported enjoying playing instruments and identified this activity as a valuable component of the class. Parents characterized singing and movement activities as enjoyable but failed to see their value for the musical development of their children. Parents reported that the class helped them understand the type of collaborative work among parents, teachers, and students that is critical in the Suzuki program.

The Suzuki music method of instruction, founded by Dr. Shinichi Suzuki, began in Japan after World War II (n.d.). Although the method was originally created for violin instruction, it has since been adapted for a wide range of instruments. The principal tenet of the method emphasizes the parallel between music learning and language acquisition. Dr. Suzuki noted that all children, regardless of hereditary factors, exhibit an incredible talent to learn their mother tongue. Diverging from the commonly held notion that musical talent is an innate gift, the Suzuki philosophy maintains that all children are born with musical ability. This natural musical ability is developed through proper training provided in a nurturing environment (Suzuki, 1983). The Suzuki method starts music education at a very young age and bases training on imitation and repetition, the means by which all children learn their native language (Suzuki, 1973). This strategy emphasizes the development of the ear, the importance of the learning environment, and memory training. The active and involved role of the parent in their child's music education is also a defining characteristic of the Suzuki method.

A number of studies have focused on the contribution of parental involvement to children's musical achievement. Early parental support seems crucial for the development of self-motivation, independence, and character traits required for autonomous practice and continuation of study (Bloom, 1985; Davidson, Sloboda & Howe, 1995). Parents' positive attitude towards music and their involvement in children's activities have been found to be positively related to student music achievement (Brand 1986; Dai & Schader, 2001, 2002; Davidson, Howe, Moore, & Sloboda, 1996; Moore, Burland, & Davidson, 2003; Zdzinski, 1996). As demonstrated in numerous studies, the parents of students and musicians with high levels of music achievement are intensively involved in the music studies of their children, particularly during the early stages of music instruction (Bloom, 1985; Davidson, Sloboda & Howe, 1995; Moore, Burland, & Davidson, 2003; Sloboda & Howe, 1991; Sosniak, 1985; Zdzinski, 1996). These findings indicate that involved parents do not necessarily have extensive music skills or knowledge but do demonstrate a genuine interest in music and commitment to their children's music education. Interestingly, although the Suzuki method highlights the importance of the parent in the process of learning music, during actual Suzuki lessons, parents often assume a passive role and initiate little interactions with the teacher or the child (Duke, 1999). A lack of confidence in their ability to supervise practice sessions may explain their unwillingness to take a more prominent role during the lessons and home practice (Davila, 2013).

There are courses designed to introduce parents to the Suzuki method. In most of these courses, parents read *Nurtured by Love* by Shinichi Suzuki, observe group and private lessons, and learn about parenting (O'Neill, 2003). The effectiveness of these courses in preparing parents for the difficult task of supervising and structuring their young children's music practice is questionable (Davila, 2013). Even after participating in such courses, parents report that they do not know how to supervise children during practice and that practice sessions are often ineffective and stressful (Davila, 2013). Davila (2011) developed a program to teach parents of children involved in Suzuki instruction how to manage the time, content, and organization of a practice session and ways to adapt required music activities to the interests and abilities of their children. As part of this program, parents videotaped home practice sessions with their children and analyzed them with the teacher throughout the course of several weeks. According to the parents, the program improved their ability to supervise home practices and helped them develop focused and positive interactions with their children during practice sessions (Davila, 2013).

We developed a short course for parents and young children interested in entering a popular preschool Suzuki string program in Texas. Unlike other parent training classes, this course was provided *before* the start of instrumental lessons. The goal of this course was to introduce parents and children to the Suzuki method and allow them to experience some of the activities of the string program while waiting for vacancies to become available. This string program

has a waiting list of approximately 200 children, and families typically wait two to three years to be admitted. The management of the list is complicated for the institution and the long wait is disheartening for parents and children. This free course provides parents with the opportunity to interact with the teachers of the string program, observe their children in a class, and ultimately decide whether the program is well suited to the interests and needs of the child and family

The purpose of this investigation was to evaluate parents' observations of their children musical behaviors and to determine whether the class was valuable for families. Parents completed an exit questionnaire about the content and organization of the class and about their children's behaviors. All lessons were videotaped to assess the accuracy of parents' observations of their children.

Method

Sample

We selected ten parent-child dyads from the pre-school Suzuki string program waiting list to participate in the present study. The dyads were selected on the basis of future vacancies in the string program. Families who had selected instruments for which vacancies would become available the following semester were called and invited to participate. The children were between three and five years old. Two children dropped out of the course after the second week of classes and three families missed two (n=2) or three lessons (n=1). We analyzed the data collected from the five parent-teacher dyads that attended all six lessons. Three of the children were boys (ages 3 years 8 months, 4 years 2 months, and 4 years 3 months), and two were girls (3 years 10 months, and 5 years 1 month).

Procedure

Parents and children attended weekly classes, 50 minutes in duration, for a total of six lessons. The class was organized to match the duration and location of the group classes offered as part of the Suzuki program. The first 30 minutes of the lesson consisted of activities led by the teachers and the last 20 minutes included free play with instruments, discussion with the parents about the activities completed in class and to be completed at home, and parent-child activities.

The activities of the course were designed to introduce parents and children to basic music concepts and skills. Parents participated in music games, modeled skills for their children, and at times, were responsible for supervising their children's work on a task. Depending on the activity, children worked with the teachers, peers, or their own parents. Class time was divided among group activities, supervised music play, individual activities at stations, and

adult discussions about the importance of certain skills and knowledge. Teachers provided frequent feedback to both parents and children and tried to create a positive and relaxed environment.

During the class, children learned and became familiar with the members of the string family to facilitate their choice of an instrument when entering the program. To prepare children and parents for the intense collaborative work characteristic of the Suzuki string program, the teachers fostered positive interactions between parents and their children in the music context of the class. This collaborative work is critical for the performance of an instrument during childhood and an integral component of a successful model of music learning (Creech & Hallam, 2003).

The activities of the class consisted of group singing, performance on Orff instruments, movement and listening activities, introduction to the strings of the violin and cello, and familiarization with specific rhythmic motives through performance, aural, and notation exercises. Parents and students also became familiar with selected pieces that were common to both Suzuki Book I for violin (Suzuki, 1997) and Suzuki Book I for cello (Suzuki, 1999) ("Song of the Wind," "Allegro, " and "Twinkle Twinkle variations"). We directed children's attention to the articulation and form of these pieces because of their importance for the development of bow work. Listening and movement activities consisted of walking and stomping, waving scarves and clapping and tapping. Every class included playing ostinati on Orff instruments (pitches A and E on xylophones, metalophones, and glockenspiels) to the Suzuki CD or to live accompaniments played by the teachers. Selected "Suzuki rhythms" identified as 'pull pony, push pony'  and 'pepperoni pizza'  , (Suzuki, 1997 & 1999) were introduced and then reviewed at every class meeting. The teachers incorporated the rhythms into a variety of performance exercises and presented the notation of the rhythms through flashcards. Technique elements such as preparing the bow arm for the performance of violin and cello were also introduced.

A professor of music education and two music education graduate students taught the lessons. At the end of each lesson, the teachers distributed a handout outlining the activities completed that day, describing the skills and knowledge introduced during the lesson, and providing recommendations about how to continue practicing at home. During the class, the teachers talked to the parents about the purpose of particular activities and explained the connection between the skills learned in class and those required for the performance of a stringed instrument.

The lessons were videotaped and analyzed paying specific attention to parent-child interactions and student progress. During the last lesson, parents left the classroom to complete a survey while their children continued the regular activities with the teachers. The survey included:

- List up to three things we did in class that your child really enjoyed
- List up to three things we did in class that <u>you</u> really enjoyed

- List two things that your child could do really well in class and why you think s/he could do them well
- List two things that your child couldn't do well in class and why you think s/he couldn't do them well
- List up to three things that you learned in this class
- List up to three things we did in class that you think were very valuable for the musical development of your child
- How could we improve this class?

Results

Table 1 presents the activities enjoyed by the participants. Nearly all parents mentioned that both they and their child enjoyed playing instruments. Interest in movement activities was also high, Some parents referred to learning goals and teacher's attention to the children when listing the most enjoyable activities.

Table 1. *Activities Enjoyed by Parents and Children*[1]

Child	Child enjoyed…	Parent enjoyed…
Luiz	Rhythms	Playing instruments
	Playing instruments	Preview of program expectations
	Learning songs	Learning skills to do at home
Oscar	Passing the sock game	Playing different musical instruments
	Playing different instruments	Clapping and waiving scarves to music
	Guessing the instrument game	Everything!
Elaine	Playing with instruments	Singing songs
	Sock game	Listening to instruments
	Loud/soft game and movement games	Sock game
Sonia	Playing different instruments	Exposure to different instruments
	Individual attention	Variety of interesting activities
	Dancing and singing	Individual attention to child
Zsin-shu	Easy, fun activities	Good organization
		Clear learning goals for each lesson
		Fun activities & clear directions

[1]Parents responded to survey items that prompted them to list three class activities that children enjoyed and three activities that they enjoyed.

Parents' observations of what their child could and could not do well were of particular interest to us because one of the objectives of the course was to help parents observe their children's music behaviors. We analyzed the videotapes to identify the behaviors described by the parents in the questionnaire. We recorded the specific episodes during which children demonstrated the behaviors described by the parents, noting the context and focus of the activity. We also noted the date and time in which children demonstrated the target behaviors. With the exception of two statements made by the parents that were too vague to be associated with specific behaviors (i.e., "she doesn't follow the turns"), we could confirm all of the parents'

observations of their child's behaviors. The behaviors described by the parents occurred many times over the course of the six lessons. In other words, the comments parents' provided regarding their child's strengths and weaknesses proved to be very accurate. We selected one particularly clear example for each behavior described by the parent and cited it in Table 2.

Table 2. *Children's strengths and weaknesses*[1]

Child	Not so good at…	Good at…
Luiz	Sitting still	Repeating rhythms
	Movement activities	Remembering exercises
Oscar	Clapping the rhythms	Playing the drum
	Sitting for a long time	Guessing the instruments
Elaine	Identifying notes by ear	Saying rhythms
	Recognizing melodies games	Recognizing loud and soft
Sonia	Playing rhythms	Dancing to music
	Naming instruments	
Zsin-shu	Music sensibility	Following instructions
	Focusing for 30 minutes	Saying rhythms

[1]Parents responded to survey items that prompted them to list two class activities at which children were good and not so good.

Parents' opinions of the value of the class referred directly to some of the objectives provided in the handouts. The content parents found valuable is summarized in Table 3.

Table 3. *Content of the Class Parents Found Valuable for Their Child's Musical Development*[1]

Child	Instruments	Rhythms	Pitch	Management	Vocabulary
Luiz	X		X	X	
Oscar	X	X		X	
Elaine		X	X		X
Sonia	X	X		X	
Zin-shu	X			X	X

[1]Parents listed three class activities that they considered valuable for their child's development

Discussion

Although only one item on the questionnaire was a direct inquiry into the parents' opinion on the value of the class, parents provided many positive comments about the course when answering almost every question. Parents reported that they appreciated having the opportunity to experience the string program prior to making a commitment to it. They realized that participation in the program required more dedication from the parents than they had expected. They also referred to the enjoyment of playing with their children

and the value in observing other parents do so. They reported that the class helped them understand that music learning involves a vast array of skills and knowledge besides performance on an instrument. Some parents also referred to nonmusical aspects of instruction when asked about the value of the class. They stated that the individual attention and positive feedback provided by the teacher contributed to the education of their children.

When asked about changes that the teachers could make to improve the class, rather than citing flaws in the methodology or the content of the class, parents referred to scheduling issues such as the time and duration of the lessons and the continuation of the class throughout the year. They would have preferred to have the class during the week rather during the weekend and that the class be longer than six weeks. Parents also complimented the teachers in their responses. They thanked them for their expertise, warmth, patience, and flexibility and mention that having more than one teacher in the room was a luxury. It is obvious that the parents had a positive experience during the course and considered it a valuable experience for their children.

Parents referred to specific activities when commenting on the value of the class for the development of their child. The most common activity cited was the introduction and performance of instruments, which was followed by the recognition of rhythmic motives. Parents also considered the identification of pitches (open A and D strings) and the learning of musical vocabulary to be valuable. No parent referred to singing, listening, or movement activities when listing valuable activities. This is surprising as listening and movement activities were an essential part of the class and previous studies have shown that 65% of parents report playing music for their children (Custodero, Britto, & Xin, 2002). Given the strong emphasis that the Suzuki method places on listening, it is worrisome that parents failed to recognize the value of such activities. Although the teachers demonstrated the benefits of listening skills by integrating them into every activity performed in class, they did not formally discuss the importance of such skills with the parents. Teachers may consider explicitly referring to the value of listening activities in their conversation with parents.

When asked about the activities that they and their children enjoyed most, parents again referred to the performance on a variety of instruments. In this course, both parents and children had the opportunity to play barred instruments, improvise short melodic ostinati using learned rhythms, and practice simple call-response forms. Performance opportunities were present in every lesson and allowed the children and parents to integrate the knowledge and skills learned during the six weeks. The naming of pitches, recognition of rhythms, dexterity, coordination of the movements of both hands, and attention to phrasing are examples of some of the "new" skills that were easily integrated during the performance of xylophones and glockenspiels. Evidence indicating that the performance of instruments was considered both valuable and enjoyable by the parents and the students provides further support for the inclusion of

instrumental performance in early childhood classes, including those geared towards the performance of a string instrument.

Parents also listed singing and movement among the activities enjoyed most by the children. This is not surprising considering the prevalence of singing and movement activities in the daily lives of children around the world (Custodero, Rebello Britto, & Brooks-Gunn, 2003; Young & Gillen, 2007). In our study, parents referred specifically to marching to the music in different ways, playing a game that consisted of passing a sock on the beat, dancing with scarves, and learning songs as enjoyable activities. It is interesting that although parents recognized the enjoyment associated with these activities, as it has been previously discussed, they did not identify them as valuable for the development of their children. All movement activities were played to music and required listening, yet parents never cited listening as one of the activities enjoyed by the children. It is the movement rather than the listening that the parents perceived as enjoyable to the students. Perhaps, in similar classes to the one observed in this study, teachers could emphasize that children's movements occur in response to the music and that the purpose of most marching and dancing games is the refinement of listening skills and not just the development of precise and graceful movements.

Aspects of the class that parents cited as enjoyable for themselves included learning of skills that could be practiced at home, the general fun atmosphere of the class, the clear learning goals of each lesson, and the handout that they received each week. Parents obviously liked the approach and organization of the class. They appreciated learning about musical development and music education and the rationale behind the curriculum of the program. That they so often referred to the skills and concepts outlined in the short handout when completing the questionnaire reflects their interest in understanding how and why their children were introduced to such concepts.

When asked which things their child couldn't do well, parents referred to the performance and aural identification of learned rhythms, aural identification of pitches, and naming of instruments. These skills may take years to develop so it is not surprising that children did not master them during the six-week class. Teachers may consider reminding parents that sustained work towards the acquisition of a skill in a positive and nurturing environment is what is critical during the early years.

Several parents noted that it was difficult for their children to participate attentively for the duration of the lesson, to remain still, and behave appropriately when working on certain activities. The length of the lessons probably contributed to the perceived restlessness of some children. A 50-minute lesson may be too long for young children even if divided in smaller sections and composed of a variety of activities. The three children who had difficulty in remaining attentive were boys. This finding is in agreement with previous research showing that preschool boys exhibit lower attention during academic tasks than do preschool girls and that attention disorders are

more prevalent among boys than girls (e.g., Pineda et al, 1999; Ready, Douglas, LoGerfo, Burkam & Lee, 2005). In the present study, the length of lesson was set to fit the class into the string program's schedule. Unfortunately such decision had a negative impact on the boys' attentiveness level. We recommend that introductory classes be based on shorter lessons, at least during the first weeks of instruction.

When asked which activities their child could do really well, responses ranged from the performance of learned rhythms, aural identification of instruments, discrimination of contrasting dynamics, dancing to the music, and memorization of exercises. The great diversity in the responses to these two questions highlights the developmental differences between the children. While for some children striking a bar on the xylophone presented no problem, for others, the proper holding of the mallet was a major challenge. What one child excelled in, another could not do at all. The heterogeneity of a group of young children can be problematic for the teacher. However, providing a diversity of activities based on incremental levels of difficulty can allow all children to succeed in some of them and to continue engagement and learning in the activities that are beyond their developmental level of skill.

One of the most interesting findings of the study is related to parents' observations of their children's musical behaviors. Parents were precise in describing their child's musical behaviors and accurate in identifying which activities their child could or could not complete successfully (see Table 2). Observation of the videos corroborated the reports of the parents. We found many examples of the behaviors cited by the parents in our analyses of the lessons. Teachers may gain greater insight into the behaviors of the students in the class by asking the parents to describe what they observe about their children. One child, who was not successful in imitating rhythms by clapping, or striking a barred instrument, was actually very accurate when playing them on the drum. The teachers did not notice that, for this child, a specific instrument facilitated successful performance of the learned rhythms; however, the mother did notice and stated so in the questionnaire. Had the teachers known about this child's ease and enthusiasm for playing the drum, they would have provided him with more opportunities to play the rhythms on it. Although teachers are expected to know each child well, it is sometimes difficult for them to do so in just a few group lessons. By asking parents to share their observations of their children's behaviors during the lesson, teachers may gain valuable information about their students. Additionally, soliciting parents' insight may allow parents to feel more involved in the learning process of their children and validate their efforts to guide learning.

The class was valuable to the parents in yet another way - it allowed them to understand the commitment that learning an instrument requires from both the child and the caregiver. The two parents who accepted the invitation to participate in the class but missed the last lessons, told the instructors that the class was helpful in experiencing the demands of the string program. One parent

believed that the parental commitment was too great for her at the time and decided to withdraw the child from the waiting list of the string program. The other parent realized that his two children were not developmentally ready for the program and delayed their enrollment for one year. In these instances, both the parents and the institution avoided the problems associated with the withdrawal of a student from a program in the middle of the academic year.

The results of the study should be taken with caution considering the selectivity and size of the sample. Because of the nature of the class, a reduced number of parents and children were invited to participate. Participation in the class was voluntary and free and a couple of families that initially showed interest in attending discontinued after a few lessons. We recommend further research on the benefits of introductory classes for young children and their parents prior to generalizing the results of the present study.

Overall, the results of the study show that offering a general group class based on Suzuki principles is of value to the families and the institution. The class allows parents to get a glimpse of what Suzuki instruction involves and may help them set realistic expectations for themselves and their children. It also allows the institution to manage registration more effectively by maintaining a waitlist of families truly committed to the program. We recommend that in such introductory classes, parents participate actively during the lessons, children be provided with many opportunities to perform instruments, teachers communicate to parents clear and precise instructional objectives for each lesson, and parents contribute by observing their children's behaviors during classes. These recommendations will hopefully foster the strong collaborative work among parents, teachers, and children and the positive and supportive environment that characterizes the Suzuki method.

References

Bloom, B. (1985). *Developing Talent in Young People.* Random House: NY.

Brand, M. (1986). Relationship between home musical environment and selected musical attributes of second-grade children. *Journal of Research in Music Education 24*, 111-120. doi:10.2307/3344739

Creech, A. & Hallam, S. (2003). Parent-teacher-pupil interactions in instrumental tuition: a literature review. *British Journal of Music Education, 20*, 29-44. doi:10.1017/S0265051702005272

Custodero, L. A., Rebello Britto, P., & Brooks-Gunn, J. (2003). Musical lives: A collective portrait of American parents and their young children. *Journal of Applied Developmental Psychology, 24*(5), 553. doi:10.1016/j.appdev.2003.08.005

Custodero, L. A., Britto, P.R, & Xin, T. (2002). From Mozart to Motown, lullabies to love songs: A preliminary report on the parents use of music with infants survey. *Zero-to-Three Bulletin, 25* (1), 41–46.

Dai, D. Y. & Schader, R. (2001). Parent's reasons and motivations for supporting their child's music training. *Roeper Review*, 24, 23-27. doi:10.1080/02783190109554121

Dai, D. Y., Schader, R. M. (2002). Decisions regarding music training: Parental beliefs and values. *Gifted Child Quarterly, 46,* 135-144. doi:10.1177/001698620204600206

Davidson, J., Sloboda, J., & Howe, M. (1995). The role of parents and teachers in the success and failure of instrumental learners. *Bulletin of the Council for Research in Music Education, 127*, 40-44.

Davidson, J., Howe, M., Moore, D. G., & Sloboda, J. (1996). The role of parental influences in the development of musical performance. *British Journal of Developmental Psychology, 14*, 399-412. doi:10.1111/j.2044-835X.1996.tb00714.x

Davila, Y. (2011). *The influence of a parent education course on parental expectations, level of satisfaction, perceptions, and self-efficacy as home practice partners of Suzuki students: a pilot study*. Unpublished paper. University of Texas – Austin.

Davila, Y. (2013, Feb). *Supervising young children's music practice: Parents' difficulties and coping strategies.* Paper presented at the meeting of the Texas Music Education Educators. San Antonio, February 15, 2012.

Duke. R. (1999). Teacher and student behavior in Suzuki string lessons: results from an International Research Symposium on Talent Education. *Journal of Research in Music Education, 47*, 293-307. doi:10.2307/3345485

Moore, D., Burland, K., & Davidson, J. (2003). The social context of musical success: a developmental account. *British Journal of Psychology*, 94, 529-549. doi:10.1348/000712603322503088

O'Neill, A. A. M. (2003). Parent as home teacher of Suzuki cello, violin, and piano students: observation and analysis of Suzuki method practice sessions (thesis). Retrieved from http://etd.ohiolink.edu/view.cgi/ONeill%20Alice%20Ann%20Mary.pdf?osu107037 6603

Pineda, D. A., Ardila, A., Rosselli, M., Arias, B. E., Henao, G. C., Gomez, L. F., & ... Miranda, M. L. (1999). Prevalence of attention-deficit/hyperactivity disorder symptoms in 4- to 17-year-old children in the general population. *Journal of Abnormal Child Psychology, 27*(6), 455-462. doi:10.1023/A:1021932009936

Ready, D. D., LoGerfo, L. F., Burkam, D. T., & Lee, V. E. (2005). Explaining Girls' Advantage in Kindergarten Literacy Learning: Do Classroom Behaviors Make a Difference?. *The Elementary School Journal,106*(1), 21-38. doi:10.1086/496905

Sloboda, J. & Howe, M.(1991). Biographical precursors of musical excellence: an interview study. *Psychology of Music, 19,* 3-21. doi:10.1177/03573569119001

Sosniak, L. A. (1985). Learning to be a concert pianist. In B.S. Bloom (Ed.), *Developing Talent in Young People* (pp. 19-67). New York: Ballantine.

Suzuki, S. (1983). *Nurtured by Love.* Smithtown, New York: Exposition Press.

Suzuki, S et al. (1973). The Suzuki Concept. Berkeley, CA: Diablo Press.

Suzuki, S. (1997). Suzuki Violin School: Violin Part, Volume 1, Revised Edition. Suzuki Method International.

Suzuki, S. (1999). Suzuki Cello School: Cello Part, Volume 1, Revised Edition,. Suzuki Method International.

Suzuki Association of the Americas (n.d.). Retrieved March 24, 2013, from http://suzukiassociation.org/teachers/twinkler/

Young, S., & Gillen, J. (2007). Toward a Revised Understanding of Young Children's Musical Activities: Reflections from the "Day in the Life" Project. *Current Musicology, 84*, 79-99.

Zdzinski, S. (1996). Parental involvement, selected student attributes, and learning outcomes in instrumental music. *Journal of Research in Music Education*, 44, 34-38. doi:10.2308/3345412

An Examination of Music Student Teaching Seminars at Midwestern Universities

Christopher M. Baumgartner
University of Missouri–Columbia
May 2012
Committee Co-Chairpersons: Brian Silvey, Wendy Sims

Dissertation Abstract:

This study was designed with two main purposes: (a) to provide researchers and educators with information about the structure and content of music student teaching seminars by gathering baseline data regarding current practices and (b) to examine whether the perceived needs of music student teachers, as identified in the research literature, were being met through the contents and structure of the student teaching seminars. Music education professors from accredited institutions in nine Midwestern states were invited to participate in a researcher-designed survey that included questions pertaining to the student teaching internship, the seminar course that coincides with the internship, and assignments and activities included in the seminar. Respondents also were asked to indicate how extensively they addressed specific content areas based on the list of concerns of student teachers and cooperating teachers that had been identified. Forty-five respondents (36.9% useable response rate) completed the survey.

Results indicated that most institutions (n = 40, 88.9%) hosted an accompanying seminar course during the student teaching internship; however, only 42.5% of respondents reported a seminar designed specifically for music education majors, separate from other education majors. Seminar instructors indicated that they addressed topics pertaining to the internship, classroom management, and employment more extensively than any other area. Professional portfolios, résumé writing, and mock interviews represented the most common seminar activities. Findings suggest that, with the exception of classroom management, the topics that instructors addressed most extensively in the music student teaching seminar did not align with the perceived needs of music student teachers as reported in extant research. Seminar instructors may wish to dedicate more seminar time to discussion, reflection, and course activities that allow student teachers to address topics such as lesson planning, curriculum design, student needs, and instructional strategies with their peers and supervisors.

Responses of Elementary Students and Their Teachers to a World Music Preference Survey

Nancy J. Martin
University of Missouri–Columbia
December 2012
Committee Chairperson: Wendy L. Sims

Dissertation Abstract:

The purpose of this study was to investigate student listening preferences towards examples of unfamiliar multicultural music. A total of 445 third-, fourth-, and fifth-grade children from three elementary schools in Southwest Missouri responded to the 10-example listening survey. For each example, students rated, on separate 5-point scales, the degree to which they liked each song, would like to hear it again, or would like to purchase the music. The students' music teachers participated in interviews designed to provide a context for the student responses for each question. Results of two-way ANOVAs used to compare total scores indicated significant effects of school and grade, as well as significant school by grade interactions, for each of the three questions. While students in all three schools demonstrated moderately high interest in multicultural music, third- and fifth-grade students tended to respond the most positively. Students in one of the schools responded differently from the other two, and it was speculated that differences among schools might have reflected varying socio-economic levels of the school populations, and/or differences among the music specialists' classroom approaches and attitudes. The music specialists expressed various perspectives and concerns towards including world music in the curriculum, and were surprised by their students' level of interest and level of tolerance towards the world music examples presented.

Missouri Music Educators Association State Conference Research Poster Presentations
January 2013
Osage Beach, MO

Faculty Research

An Examination of Music Student Teaching Seminars at Midwestern Universities
Christopher M. Baumgartner, University of Missouri-Columbia

The Impact of Budget Cutbacks on Music Programs in Three Midwestern States
Frederick Burrack, Kansas State University; Daniel Hellman, Missouri State University; Dale Bazan, University of Nebraska-Lincoln; Phillip Payne, Kansas State University

A Study of the Need for Music Therapists in the Coming Decade
Robert Groene, University of Missouri-Kansas City

An Initial Survey of Elementary Music Teachers' Opinions of Skills and Characteristics Important to Successful Music Teaching
Andrew Homburg, Missouri State University

Student Perspectives on Building Identity in Mid-Level Choirs: A Pilot Study
Marci L. Major, University of Missouri-Columbia; Jacob M. Dakon, University of Kansas

The Role of Conducting Facial Expression in Students' Evaluation of Ensemble Expressivity
Brian A. Silvey, University of Missouri-Columbia

Happy 50th Anniversary, Missouri Journal of Research in Music Education
Wendy L. Sims, University of Missouri-Columbia

Master's and Doctoral Degree Final Research Projects, Theses, or Dissertations

The Effectiveness of Curwen Hand Signs and Corresponding Hand Movements on the Vocal Accuracy of Second Grade Students
Meghann Bell Elwood, Missouri State University

Differentiated Instruction in an After-School Music Program
Katherine S. Hiller, VanderCook College of Music

Using Auditory Discrimination Skills in the Beginning Band Classroom: A Case Study
Samantha R. Stevens, VanderCook College of Music

Responses of Elementary Students and their Teachers to a World Music Preference Survey
Nancy J. Martin, University of Missouri-Columbia

Student Projects

Children's Attitude Towards the MU String Project
Adamilson Abreu, University of Missouri-Columbia

The Effect of Congruent or Alternating Mallet Playing on First Graders' Performance of Steady Beat
Jenna R. Ash, University of Missouri-Columbia

Manipulating Choral Singing Through Imagery
Melissa Baughman, University of Missouri-Columbia

Musical Playground
Katy Cline, University of Missouri-Columbia

A Multi-Stage Investigation of the Effects of Free- and Programmed-Style Practice Reports on Beginning String Students
Dustin Bennett Frieda, University of Missouri-Columbia

Student-Centered Technology Use Among Missouri K-12 Music Students within Music Classrooms
Daniel J. Keown, Charles R. Robinson, & Rita Barger, University of Missouri-Kansas City

The Auditory Reinforcement of the Left Hand for Accuracy of Performing Piano Music by Memory
Huiyun Liang, University of Missouri-Columbia

The Effect of Practice Log Type on Performance
Jackie Lordo, University of Missouri-Columbia

Practice Recording Preferences of Female Collegiate Choral Musicians
Elizabeth Hogan McFarland, University of Missouri-Columbia

Factors Contributing to the Participation of Non-Music Majors in Collegiate Bands
Jennifer Moder & Joseph Parisi, University of Missouri-Kansas City

"Music They'll Appreciate:" A Study of Adolescent Listening Preferences and Implementation into the Secondary General Music Classroom
Brian R. Parks, University of Missouri-Columbia

The Effects of Historical and Analytical Teaching Approaches in a Music Appreciation Class
Brandon E. Robinson, University of Mississippi

An Historical Study of Irvin Cooper, Choral Music Educator
Philip Stockton, University of Mississippi

An Observational Study Investigating the Use of Piano in the Rehearsals of Five Successful High School Choral Directors
Nathan Trahan, University of Mississippi

Musical Concepts Employed by Artist-Level Jazz Performers Playing an Improvised Solo
Jonathan Whitmire, University of Mississippi

A Survey of Vocal Behaviors, Vocal Stress, and Vocal Health Perceptions of Professional Voice Users
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Those who wish to submit a report for consideration should comply with the following guidelines:

1) There will be three kinds of research accepted for presentation: a) completed master's theses or doctoral dissertations; b) reports of original research studies, and c) student non-degree projects.

2) a) To submit completed master's or doctoral research, it only is necessary to submit a copy of the abstract, a copy of the document's title page, and a copy of the signature page which indicates that the paper was accepted in partial fulfillment of degree requirements. The name of the degree-granting institution should appear on one of these pages, or must be included with the submission, as well as the author's full name and e-mail. If all of the above-mentioned items are included, the completed thesis or dissertation will be guaranteed acceptance for presentation. These may be sent by e-mail to the address on the next page.

b) To submit a report of an original research project, e-mail a copy of the complete paper, including an abstract, in Word document format. The project should demonstrate sound research practices and writing style and should be complete. Small scale studies, including action research, are appropriate for this forum. The author's name, address, e-mail, and current school affiliation should appear only on a separate page/file from the abstract and/or manuscript.

c) Students may present non-degree projects that are submitted by faculty at Missouri colleges and Universities. Faculty members should contact Wendy Sims at the address below for further information.

3) Papers presented at conferences other than previous MMEA state conferences *will* be permitted as long as this is clearly indicated in a statement included with the submission.

4) Authors will be apprised of the results of the selection process by e-mail. A hard copy of acceptance letters will be provided upon request.

5) Submissions must arrive at the address below by December 12, 2013. Authors will receive notification of acceptance by the end of December. Address submissions (or questions) to:

Wendy Sims, University of Missouri-Columbia
SimsW@missouri.edu

We will look forward to a large number of submissions and to another interesting and lively research session.

INFORMATION TO CONTRIBUTORS

The *Missouri Journal of Music Education* is a publication devoted to the needs and interests of the school and college music teachers of Missouri and of the nation. The editorial committee of the journal encourages submissions of original research pertinent to instruction in music of a philosophical, historical, quantitative or qualitative nature.

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Style. Manuscripts should conform to the most recent style requirements set forth in the *Publication Manual of the American Psychological Association* (APA, Sixth edition). Authors of non-quantitative papers may alternatively choose to adhere to *The Chicago Manual of Style*, or *A Manual for Writers of Term Papers, Theses, and Dissertations* (K. L. Turabian). Styles should not be mixed within the submission. The text should be double-spaced and use a 12-point font. All figures and tables should be submitted camera ready within the manuscript and designed so that they will fit with the page space of the journal (approximately 4.5 inches wide by 7.5 inches high) and use an 8-point or larger font size. To assure anonymity during the review process, no identifying information should be included in the submission.

Review Procedures. Three editorial committee members review submissions in a blind review process. Authors will normally be notified of the status of the review within two months. The editorial committee subscribes to the Research Publication/Presentation Code of Ethics of the Music Education Research Council of MENC: The National Association for Music Education and the National Research Committee of the American Music Therapy Association.

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