# Texas Music Education Research 2010

Reports of Research in Music Education
Presented at the Annual Meeting of the Texas Music Educators Association
San Antonio, Texas, February, 2010

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# A Comparison of the Hand Position of Beginning Violin and Viola Students Enrolled in Private String Lessons

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## Purpose

University string projects provide opportunities for future string teachers to learn pedagogy under the guidance of a master teacher and to apply their knowledge through providing low-cost group and/or private instruction on string instruments (Byo & Cassidy, 2005). String projects are not substitutes for public school programs; rather, they serve as resources for current school programs and become catalysts for new programs (Hurley, 1998). The longevity of the string project concept is evidenced by the first string project, established by the University of Texas in 1948, and the current model for new string projects, the University of South Carolina, established in 1974.

Gillespie and Hamann (1998) cited trends that predicted a future shortage of string teachers to fill the needs of the profession. Further research revealed that in the 1999-2000 school year, 24% of string teaching vacancies were not filled due to a shortage of string teachers; by the 2000-2001 school year that number had risen to 43% (Hamann, 2002; Hamann, Gillespie, & Bergonzi, 2002). In 1999, in an attempt to alleviate the growing string teacher shortage, the American String Teachers Association (ASTA) with the National School Orchestra Association (NSOA) created the National String Project Consortium (NSPC). One goal of the NSPC was to target and seek funding for additional string project sites (Gillespie & Hamann, 1999). In 2000, a grant from the U. S. Department of Education Fund for the Improvement of Post-Secondary Education enabled the formation of 13 university string projects based on a program model, the University of South Carolina String Project. Additional contributions toward operational funding were provided from both the music industry and charitable foundations (Byo & Cassidy, 2005). In 2007, five additional string projects were added to the NSPC bringing the total number to thirty. Each of these new string projects were based on the USC model as a requirement for grant underwriting. One of the new programs, the Baylor University String Project (BUSP), was funded, in part, by a grant from The International Music Products Association (NAMM) and through in-kind sponsorship by the university.

Byo and Cassidy (2005) documented the positive effects of string projects on development, recruitment, and retention of string education majors as well as the growth of string programs in

string project attendance areas.  This research has provided an advocacy tool in establishing additional new string project sites.

While such noteworthy research has documented the effects of string projects on the recruitment and retention of new string teachers and the growth of new school string programs, two areas not addressed are the pedagogical benefits, if any, to community students participating in a string project and the concept of "affordable instruction" as an objective of string projects, in relation to other programs of supplemental string instruction available (Byo & Cassidy, 2005).  The current study was designed to answer the following question: To what degree does participation in the Baylor University String Project affect the development of proper left and right hand position in beginning violin and viola students as compared to participation in school programs, private lessons, and combinations of these.  A secondary question revolves around the issue of "affordable instruction": When students receive supplemental instruction to that received in public school programs, is there a cost-benefit difference between string project instruction and private lesson instruction?

## Method

The study sample consisted of 189 beginning violin and viola students who comprised four instructional groups: school only ($n = 130$), string project only ($n=19$), school + string project ($n = 32$), and school + private lessons ($n = 8$).  Participants were evaluated at the end of the first semester of instruction.  In order to increase group size, the assessment was administered to two consecutive beginning classes in Fall 2007 and 2008.  The study was limited to violin and viola students because the criteria measured with the evaluation tool were virtually the same for beginners of both types of instruments.

The local school districts included in this study begin string instruction in the 5th grade, whereas BUSP begins instruction in the 3rd through 5th grades. Consequently, BUSP 5th grade students were in the "school + string project" group. In an attempt to control for maturation issues, only 4th grade students were selected for the "string project only" group.

Public school string programs met for 45 minutes, twice weekly.  String Project classes also met for 45 minutes, twice weekly at a cost of $35 per semester.  Private lesson instruction consisted of one 30-minute lesson each week at a cost of $15 per lesson.

*Orchestra Expressions, Book 1* was used as the primary text for both the String Project and participating school programs (Alexander, Anderson, Brungard, & Dackow, 2004).  Visual models and assessment rubrics found in the *Orchestra Expressions* string method were used to assess individual student development of bow hold, left wrist, left hand position, and instrument position (see Appendices A and B).  The use of still photographs as visual reference aids in the task of error detection is evidenced throughout modern research.  Still photographs were used by Maddox as visual references for discrimination and diagnosis of string student left and right hand positions (1972).  Froseth studied the use still photographs and slides as visual references for diagnosis of position errors, and developed diagnostic training materials for brass, woodwinds and violin (1978).  Gillespie (1987, 1991) researched the benefits of visual aids to the diagnosis of common violin bowing problems.  He developed and tested a "Violin Bowing Diagnostic Skills Training Program" and a "Violin Bowing Diagnostic Skills Test" which used video to illustrate both exemplary and problematic bowing accompanied by a list of possible solutions. The current study used the visual references found in the students' method book and the

assessment rubrics contained in the teachers' manual (Alexander, Anderson, Brungard, & Dackow, 2004).

The evaluators were the BUSP Master Teacher and the orchestra directors from the participating public schools. All evaluators were trained by the String BUSP Master Teacher in the administration of the observation tool prior to the assessment period. Each student's left and right hand position was scored from zero (no errors) to 6 (six errors) as they performed a melody from their textbook. Participants were evaluated only on visual deviations from the standards as illustrated in their textbook; no points were added or subtracted for pitch or rhythmic accuracy.

## Results

Due to the large discrepancies between the sample sizes of the four instructional groups the use of parametric statistical tests was not appropriate; therefore, results are described as comparisons between group means.

Table 1
*Mean Errors by Group*

_____

| GROUPS | MEAN OF ERRORS (6 possible errors) |
|---|---|
| School | 2.28 |
| String Project | 2.00 |
| School + String Project | .81 |
| School + Private Lessons | .75 |

_____

The mean number of hand position errors made by each group are shown in Table 1. There were no remarkable differences between mean error scores for the school only and string project only groups (mean difference of .28 errors) and between mean errors scores for the school + string project and school + private lessons groups (mean difference of .06 errors). However, there are noticeable differences between mean error scores for the groups that received instruction from two sources and those that received instruction from one source, with school + string project and school + private lesson groups outscoring the other groups: school + string project vs. school only, 1.47; school + string project vs. string project alone, 1.19; school + private lessons vs. school only, 1.53; and school + private lessons vs. string project alone, 1.25. There was no difference between the error scores of students by instrument. Mean error scores between violinists (2.39) and violists (2.45) differed only by .06 errors.

Because there was no significant difference between mean error scores for school + string project and school + private lessons groups, I compared the cost-effectiveness of student participation in string project and private lessons (see Table 3). Students in the school + string project group who paid approximately $2.90 per week for 90 minutes of weekly group instruction performed this task with a group mean of .81 errors, whereas students in the school + private lessons group who paid $15 for a 30-minute weekly lesson performed with a group mean of .75 errors.

Table 3.
*Groups by Means of Errors, Total Minutes of Instruction, and Weekly Cost*

| GROUP | MEAN OF ERRORS | TOTAL MIN. PER WEEK | ADDED WEEKLY COST |
|---|---|---|---|
| School + string project | .81 | 180 | $2.90 |
| School + private lessons | .75 | 120 | $15.00 |

## Discussion

These data suggest that the schools and string project described in this study are markedly similar in their effectiveness for establishing proper violin and viola hand position; however, the addition of either string project instruction or private lesson instruction to participation in public school string programs yielded improvements in students' ability to demonstrate proper hand position. This is not surprising in that the number of minutes of instruction per week was increased from 90 minutes in school alone to between 120-180 minutes when supplemented with private lesson or string project instruction, respectively.

When comparing school + string project to school + private lessons, the cost for the school instruction is the same; the difference in cost involves the fee structure of the string project versus that of private lesson instruction. Whereas the string project cost was approximately $2.90 per week for 90 minutes of weekly group instruction, the average cost of weekly private instruction for beginning string students was $15 for a 30-minute lesson. When mean error scores were compared by cost, students in the school + private lessons group paid approximately $12 more and received 60 fewer minutes of instruction than did their peers in the school + string project groups, but the two groups performed with very similar hand position error scores on this melody. Although these data support enrollment in the string project as a cost-effective alternative to enrollment in private lessons as a supplement to beginning school instruction, it does not take into account any teacher effect, influence of parents on home practice, transportation or other related costs.

Given the differences that may be found between communities and string projects, the results may be generalized to those communities that have string projects and school programs operating under similar conditions.

Replication of this study at similar string project sites may confirm the findings of the current study and/or provide advocacy data for promotion of the string project concept within similar communities. The addition of cello and bass students to the sample would also increase the ability to generalize the results to other similar string projects.

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**Appendix A**

*Student Instrument Position Assessment Tool*

# STUDENT INSTRUMENT POSITION ASSESSMENT

**BACKGROUND DATA:**

**School** _____

**Instrument** _____ **Grade Level** _____

**Race (Circle One)**     **Asian**     **Black**     **Hispanic**     **White**     **Other** _____

**Pedagogical Method(s) (Circle all that apply):**

         **School Program**       **Private Lessons**       **String Project**

**VISUAL ASSESSMENT:**

**Bow Hold (check all that apply)**
   \_\_\_**Ideal**
   \_\_\_**Thumb not bent out**
   \_\_\_**Little finger straight, not curved**
   \_\_\_**Hand appears awkward**

**Left wrist (Check one)**
   \_\_\_**Ideal (straight wrist)**
   \_\_\_**Collapsed (concave)**
   \_\_\_**Extended (Convex)**

**Left Hand Position (Check One)**
   \_\_\_**Ideal (Neck of instrument cradled between thumb and first finger with space in the "valley")**
   \_\_\_**Neck of the instrument held down in the "valley" between thumb and first finger**
   \_\_\_**Thumb is placed underneath the neck**

**Instrument Position (Check all that apply)**
   \_\_\_**Level table**
   \_\_\_**Scroll to low**
   \_\_\_**Scroll too high**

**REFER to PAGE 6 and 11 in *ORCHESTRA EXPRESSIONS, BK 1*:**
     **Page 6 - Left Hand Playing Position**
     **Page 11 - Bow Hold on Bow**

**Appendix B**

*Left Hand Playing Position and Bow Hold on the Bow*

## Left Hand Playing Position

- Form the shape of a "C" in your left hand with the fingers lightly curved.

- Cradle either side of the neck in the "C," supporting it between the pad of your thumb and the base knuckle of your first finger.

- Check to see if there is space in the "valley" between your thumb and first finger by inserting a pencil with your right hand.

- The left wrist joint should be straight and the elbow tucked under the center of the instrument. Point your left elbow toward your belt buckle.

## Bow Hold on Bow
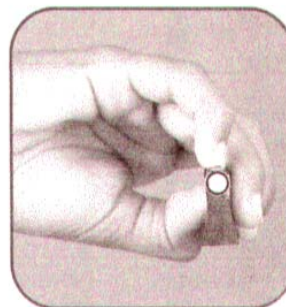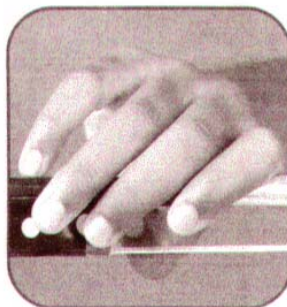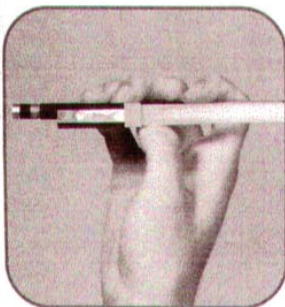
- Make sure your thumb contacts the stick between the winding and the frog.

# Effect of Socioeconomic Status on Musical Achievement as Reflected in Texas U.I.L. Choral Contest Ratings

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Stereotypes are oftentimes attached to people, or groups, consequently resulting in a label that can be positive or negative.  The education field is not exempt from stereotypes; "Boys are rowdy," "Students today are lazy," and "All kids care about are themselves" are some examples. Negative stigmas are also attached to students with low socioeconomic status (SES) levels and/or poor parent support, oftentimes leading to predetermined ideas about student achievement, behavior, family life, and values.

Stigmas are not only placed on students, but also on schools and choral programs.  These generalizations can include statements such as:  "You do not have to work as hard as I do because you work at the rich school," or "Your students will be successful because they have money."  These statements are not only insulting to teachers, but are degrading to students from lower socioeconomic backgrounds.

Research has demonstrated that students in high socioeconomic areas/homes tend to score better on standardized tests (Fitzpatrick, 2006), have higher attendance rates (Kinney, 2008), and are academically more successful (Nichols, 2003).  The purpose of this study is to examine the correlations between musical achievement and SES.  The hypothesis is that little connection exists between SES and musical achievement, supporting the conclusion that perhaps musical achievement is based more on teacher effectiveness than the socioeconomic level and background of students in a choral program.

Students with low socioeconomic levels face many educational barriers and are especially vulnerable to the long-term outcomes of poor academic performance, cognitive development, and educational attainment (Perez-Johnson & Maynard, 2007).  Research has focused on investigating the effects of socioeconomic status on academic achievement yet correlations between SES and musical achievement have only been documented by a handful of studies (Albert, 2006; Daniels, 1986, McCarthy, 1980).

A number of studies indicate that there is a relationship between SES and musical achievement.  Albert (2006) found that schools with high socioeconomic levels were more likely to contain high-quality instrumental programs.  McCarthy (1980), in his study of musical achievement, instruction, and dropout rates in an urban elementary instrumental program, determined that "socioeconomic status [was] able to account for unique proportions of variance on [student] performance on an audiovisual music reading test, a performance sight-reading test, and attrition from the music program" (p. 59).  Daniels (1986) found that SES was the predominant factor in predicting sight-reading skill in high school choirs.  He went on to state that students in schools with high SES averages were "more likely to have been afforded

opportunities for musical enrichment and to come from homes with environments more conducive to achievement in music" (p. 286).

Research investigating the effect of SES on young children's musical abilities has proven valuable, in that their musical training is limited. In a study of children, ages 6 to 8 years, Barrett (1993) found that high SES was the best predictor of high scores on the Primary Measures of Music Audiation.  In a study of predominantly Mexican-American second graders, Brand (1986) determined that parents of students from low-SES homes tended to show little support for their child's music education.

In a study measuring student retention in instrumental music ensembles, Klinedinst (1991) found that SES was a significant factor in the retention of students in secondary instrumental ensembles.  Nierman and Veak (1997) explored the effect of SES on fourth-grade students' attitudes toward playing the recorder by varying methods of introduction to the instrument. Students assigned to the experimental groups with high-SES levels saw significant increases in student attitude, as compared to the control group, while students with middle- and low-SES levels saw virtually no change in student attitude.  Nierman and Veak suggest that students in the high-SES grouping "have the means to interact with the electronic media such as video games more frequently than do other SES groups, and thus, were attracted to the novelty of the 'hands-on' experience of playing the recorder" (p. 387).

The purpose of this study was to determine if a relationship exists between socioeconomic status and musical achievement as reflected in Texas University Interscholastic League Choral Concert and Sight-Reading contest ratings.  The following research questions were addressed:
1.  Do correlations (negative or positive) exist between musical achievement and SES?
2.  Do schools with high SES levels tend to perform differently at U.I.L. contests?  If yes, do differences occur in concert ratings, sight-reading ratings, or both?
3.  Do schools with low SES levels struggle at U.I.L. contests?  If yes, do differences occur in concert ratings, sight-reading ratings, or both?
4.  Which has a greater impact on contest ratings, the director, or students' SES?
5.  Do predominantly rural, suburban, or urban regions tend to perform better at contests?
6.  What types (treble, tenor-bass, or mixed) and/or levels of choirs (varsity, non-varsity, sub non-varsity) are the most successful at U.I.L. contest? Which types are the least successful?

## Method

Choral ensembles ($N = 657$) used in this research were selected from seven different regions as defined by the Texas Music Educators Association (TMEA).  Regions, representing TMEA Areas A-G, were randomly selected, and included rural, suburban, and urban school districts. For the purpose of this study, regions were classified by the following indicators:  Region 5 – urban, Region 10 – rural, Region 12 – suburban, Region 15 – urban, Region 16 – rural, Region 20 – urban, and Region 25 – suburban.

Choirs ($N = 657$) were sorted first into categories determined by level of school: middle school ($n = 333$) and high school ($n = 324$) and then into subcategories determined by type of ensemble.  Middle school categories included: varsity treble choirs, non-varsity and sub-non varsity treble choirs, varsity and non-varsity tenor-bass choirs, and varsity and non-varsity mixed choirs.  High school categories included:  varsity mixed choirs, non-varsity and sub non-varsity mixed choirs, varsity treble choirs, non-varsity and sub-non varsity treble choirs, and varsity and non-varsity tenor-bass choirs.

To determine the effects of SES on musical achievement, the school's percentage of disadvantaged students was compared to their U.I.L. choral concert and sight-reading ratings. Choral ratings were compiled using U.I.L. contest archives (University Interscholastic League, 2009); school disadvantaged student percentages were acquired from the 2009 Texas Education Agency (TEA) Accountability Ratings.

Middle school economically disadvantaged percentages (abbreviated as Econ Dis %) was determined using the following formula:

$$\textbf{Middle School Campus Econ Dis \%} = \frac{\textit{Reading Test Econ Dis \% + Mathematics Test Econ Dis \%}}{2}$$

This formula was chosen because all students in grades 6 through 8 must take both the Reading and Mathematics TAKS tests (Texas Education Agency, 2009); averaging both the Reading and Mathematics tests provides the best indicator of a campus' economically disadvantaged percentage, as they are not readily made available for student confidentiality purposes.

High school economically disadvantaged percentages (abbreviated as Econ Dis %) was determined using the following formula:

$$\textbf{High School Campus Econ Dis \%} = \frac{\textit{Reading/ELA Test Econ Dis \% + Mathematics Test Econ Dis \%}}{2}$$

At the high school level, students in grades 9 through 11 are required to take both the Reading/English Language Arts (ELA) and the Mathematics TAKS tests (note: grade 9 is required to take the Reading TAKS while grades 10 and 11 take the ELA TAKS) (Texas Education Agency, 2009). Like middle school, this formula gives the best estimate of a campus's economically disadvantaged percentage. Resulting data were analyzed using basic linear correlation and regression techniques comparing the school's percentage of disadvantaged students with their respective U.I.L. choral concert and sight-reading ratings.

Results

Results indicated a negative correlation between disadvantaged populations and concert and sight-reading contest ratings in every voicing and level of ensemble analyzed (see Table 1).

Table 1
*Correlations between U.I.L. concert and sight-reading ratings and school SES by voicing 0.99 confidence intervals (CI)*

| Voicing | Concert | Sight-Reading |
|---|---|---|
| Middle School Varsity Treble Choirs | [-.66, .94] | [-.88, .82] |
| Middle School Non-Varsity/ Sub Non-Varsity Treble Choirs | [-.59, .95] | [-.75, .91] |
| Middle School Varsity/Non-Varsity Tenor-Bass Choirs | [-.83, .88] | [-.72, .93] |
| Middle School Varsity/Non-Varsity Mixed Choirs | [-.87, .83] | [-.91, .77] |
| High School Varsity Mixed Choirs | [-.72, .92] | [-.73, .92] |
| High School Non-Varsity/ Sub Non-Varsity Mixed Choirs | [-.50, .96] | [-.27, .97] |
| High School Varsity Treble Choirs | [-.89, .81] | [-.72, .92] |
| High School Non-Varsity/ Sub Non-Varsity Treble Choirs | [-.80, .90] | [-.62, .95] |

Tables 2-10 display the concert and sight-reading ratings and percentage of disadvantaged students by Region for middle school and high school choirs divided by choir voicings. Through analysis and comparison of means of these data, the study revealed that varsity treble choirs ($M = 1.44$) at the middle school level (see Table 2) and varsity/non-varsity/sub non-varsity tenor-bass choirs ($M = 1.33$) at the high school level (see Table 8) received the highest ratings in concert performance. Both middle school ($M = 1.78$) (see Table 2) and high school non-varsity/sub non-varsity treble choirs ($M = 1.69$) (see Table 10) received the lowest ratings in concert performance. In sight-reading contests, highest ratings were achieved by middle school varsity treble ($M = 1.65$) (see Table 2) and high school varsity/non-varsity/sub non-varsity tenor-bass choirs ($M = 1.33$) (see Table 8). The lowest sight-reading ratings were found in the middle school non-varsity/sub non-varsity treble choirs ($M = 2.21$) (see Table 3) and high school non-varsity/sub non-varsity mixed choirs ($M = 1.99$) (see Table 7).

Table 2
*Mean of concert and sight-reading scores of middle school varsity treble choirs*
*(n = 128) and percentage disadvantaged by Region*

| Region | *n* | Concert | SR | % Disadvantaged |
|---|---|---|---|---|
| 5 | 21 | 1.28 | 1.33 | 50.04 |
| 10 | 16 | 1.62 | 2.18 | 54.12 |
| 12 | 19 | 1.42 | 1.84 | 38.15 |
| 15 | 12 | 1.58 | 1.50 | 74.50 |
| 16 | 17 | 1.29 | 1.58 | 49.64 |
| 20 | 18 | 1.77 | 1.94 | 50.27 |
| 25 | 25 | 1.32 | 1.36 | 22.32 |
| | *N*=128 | *M* = 1.44 | *M* = 1.65 | *M* = 48.43 |

Table 3
*Mean of concert and sight-reading scores of middle school non-varsity/sub non-varsity treble*
*choirs (N = 96) and percentage disadvantaged by Region*

| Region | *n* | Concert | SR | % Disadvantaged |
|---|---|---|---|---|
| 5 | 15 | 1.46 | 1.33 | 46.33 |
| 10 | 1 | 3.00 | 2.00 | 72.00 |
| 12 | 23 | 2.14 | 3.18 | 64.54 |
| 15 | 11 | 1.60 | 1.60 | 75.20 |
| 16 | 12 | 1.91 | 2.08 | 55.91 |
| 20 | 14 | 1.92 | 2.85 | 60.71 |
| 25 | 20 | 1.50 | 1.75 | 19.05 |
| | *N*=96 | *M* = 1.78 | *M* = 2.21 | *M* = 51.87 |

Table 4
*Mean of concert and sight-reading scores of middle school varsity/non-varsity tenor-bass choirs (N = 78) and percentage disadvantaged by Region*

| Region | *n* | Concert | SR | % Disadvantaged |
|--------|------|---------|----|-----------------|
| 5 | 18 | 1.72 | 1.94 | 52.33 |
| 10 | 2 | 1.00 | 1.00 | 38.00 |
| 12 | 10 | 1.90 | 2.20 | 42.10 |
| 15 | 10 | 1.50 | 1.70 | 71.00 |
| 16 | 15 | 1.86 | 1.80 | 46.33 |
| 20 | 6 | 1.50 | 1.50 | 43.16 |
| 25 | 17 | 1.58 | 1.41 | 21.47 |
| | *N* = 78 | *M* = 1.67 | *M* = 1.74 | M = 44.45 |

Table 5
*Mean of concert and sight-reading scores of middle school varsity/non-varsity mixed choirs (N = 31) and percentage disadvantaged by Region*

| Region | *n* | Concert | SR | % Disadvantaged |
|--------|------|---------|----|-----------------|
| 5 | 2 | 1.00 | 1.00 | 52.00 |
| 10 | 7 | 2.00 | 2.42 | 42.85 |
| 12 | 4 | 2.25 | 3.25 | 36.50 |
| 15 | 5 | 1.20 | 1.20 | 65.00 |
| 16 | 3 | 2.00 | 1.66 | 48.00 |
| 20 | 4 | 2.00 | 2.00 | 58.75 |
| 25 | 6 | 1.33 | 1.50 | 13.66 |
| | *N* = 31 | *M* = 1.70 | *M* = 1.93 | *M* = 43.09 |

Table 6
*Mean of concert and sight-reading scores of high school varsity mixed choirs (N = 100) and percentage disadvantaged by Region*

| Region | $n$ | Concert | SR | % Disadvantaged |
|--------|-----|---------|-----|-----------------|
| 5 | 14 | 1.28 | 1.21 | 31.28 |
| 10 | 15 | 1.80 | 1.93 | 40.46 |
| 12 | 16 | 1.62 | 1.81 | 29.81 |
| 15 | 7 | 1.57 | 1.57 | 69.14 |
| 16 | 15 | 1.46 | 1.80 | 42.33 |
| 20 | 22 | 1.95 | 2.36 | 54.09 |
| 25 | 11 | 1.54 | 1.54 | 18.81 |
| | $N = 100$ | $M = 1.63$ | $M = 1.81$ | $M = 40.37$ |

Table 7
*Mean of concert and sight-reading scores of high school non-varsity/sub non-varsity mixed choirs (N = 21) and percentage disadvantaged by Region*

| Region | $n$ | Concert | SR | % Disadvantaged |
|--------|-----|---------|-----|-----------------|
| 5 | 7 | 1.00 | 1.57 | 27.00 |
| 10 | 2 | 2.00 | 2.00 | 35.50 |
| 12 | 1 | 3.00 | 5.00 | 80.00 |
| 15 | 1 | 2.00 | 3.00 | 96.00 |
| 16 | 1 | 1.00 | 1.00 | 23.00 |
| 20 | 3 | 2.00 | 2.00 | 51.00 |
| 25 | 6 | 2.00 | 2.00 | 18.66 |
| | $N = 21$ | $M = 1.66$ | $M = 1.99$ | $M = 34.47$ |

Table 8
*Mean of concert and sight-reading scores of high school varsity/non-varsity/sub non-varsity
tenor-bass choirs (N =51) and percentage disadvantaged by Region*

| Region | *n* | Concert | SR | % Disadvantaged |
|---|---|---|---|---|
| 5 | 12 | 1.08 | 1.50 | 29.41 |
| 10 | 4 | 1.50 | 1.25 | 36.25 |
| 12 | 8 | 1.75 | 1.50 | 30.62 |
| 15 | 5 | 1.20 | 1.40 | 61.00 |
| 16 | 7 | 1.28 | 1.14 | 39.14 |
| 20 | 5 | 1.60 | 1.20 | 19.40 |
| 25 | 10 | 1.20 | 1.20 | 16.50 |
| | *N* = 51 | *M* =1.33 | *M* =1.33 | *M* =29.48 |

Table 9
*Mean of concert and sight-reading scores of high school varsity treble choirs (N = 67) and
percentage disadvantaged by Region*

| Region | *n* | Concert | SR | % Disadvantaged |
|---|---|---|---|---|
| 5 | 12 | 1.00 | 1.25 | 29.58 |
| 10 | 7 | 1.28 | 2.71 | 38.71 |
| 12 | 15 | 1.60 | 2.06 | 38.06 |
| 15 | 7 | 1.00 | 2.14 | 74.85 |
| 16 | 7 | 1.28 | 1.42 | 42.42 |
| 20 | 11 | 2.09 | 2.54 | 52.72 |
| 25 | 8 | 1.62 | 1.87 | 23.12 |
| | *N* = 67 | *M* =1.44 | *M* =1.98 | *M* = 41.53 |

Table 10
*Mean of concert and sight-reading scores of high school non-varsity/sub-non varsity treble choirs (N = 85) and percentage disadvantaged by Region*

| Region | *n* | Concert | SR | % Disadvantaged |
|--------|-----|---------|------|-----------------|
| 5 | 18 | 1.38 | 1.55 | 30.22 |
| 10 | 5 | 2.20 | 3.00 | 47.20 |
| 12 | 16 | 2.06 | 2.56 | 38.31 |
| 15 | 9 | 1.56 | 2.11 | 66.33 |
| 16 | 11 | 1.36 | 1.72 | 38.18 |
| 20 | 10 | 2.20 | 2.40 | 36.80 |
| 25 | 16 | 1.50 | 1.43 | 16.43 |
| | *N* = 85 | *M* =1.69 | *M* =1.98 | *M* =35.77 |

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## Discussion

### Research Question 1

*Do correlations (negative or positive) exist between musical achievement and SES?*
   The results of this study indicate a strong negative correlation between the socioeconomic makeup of a choral program and its success at choral music contests. As shown in Table 1, every category indicated significant negative correlations in both concert and sight-reading ratings.

### Research Question 2

*Do schools with high SES levels tend to perform better at U.I.L. contests? If yes, do differences occur in concert ratings, sight-reading ratings, or both?*
   The data indicated that schools that were in higher SES areas received both high and low contest ratings. Variable ratings occurred in both concert and sight-reading contests.

### Research Question 3

*Do schools with low SES levels struggle at U.I.L. contests? If yes, do differences occur in concert ratings, sight-reading ratings, or both?*
   The data indicated that schools that were in lower SES areas received both low and high contest ratings. Variable ratings occurred in both concert and sight-reading contests.

### Research Question 4

*Which has a greater impact on contest ratings, the director, or students' SES?*
   Several inconsistencies were found in the data through analysis of contest ratings and school SES. These results seem to suggest that musical achievement may be based more on the

effectiveness of the teacher, rather than the socioeconomic level of students within a school. It is also possible that results were affected by other unidentified variables other than SES or teacher effectiveness.

## Research Question 5

*Do predominantly rural, suburban, or urban regions tend to perform better at contests?*

Although U.I.L. contest judges are trained through the Texas Music Adjudicators Association prior to judging, variability in scores is often seen across the state, especially in concert ratings. Rating variations are easier to identify in sight-reading contests, as sight-reading contests across the state (regardless of region) are required to use the same musical selection for contest. When comparing each region's separate choral events (Tables 2-10) to the state average, largely rural regions (Regions 10 and 16) had higher sight-reading averages in 11 of the 18 events, predominantly suburban regions (Regions 12 and 25) had higher sight-reading averages in 8 of the 18 events (note: one event was a tie), and primarily urban regions (Regions 5, 15, and 20) had higher sight-reading averages in 15 of the 27 events. A longitudinal study is recommended to determine if urban regions tend to perform better at sight-reading contests than suburban and/or rural regions on a consistent basis.

## Research Question 6

*What events (treble, tenor-bass, or mixed) and/or levels of choirs (varsity, non-varsity, sub non-varsity) are the most successful at U.I.L. contest? Which events are the least successful?*

Upon closer examination of the contest results, it is notable that at the middle school level, varsity treble choirs received the highest overall scores in both concert and sight-reading. This may be because of the adolescent female's enhanced growth rates over adolescent males; however, further studies should be conducted to determine other possible reasons for this discrepancy. Interestingly, it was the non-varsity/sub non-varsity treble choir event that received the lowest ratings in concert and sight-reading.

At the high school level, tenor-bass choirs received the highest ratings in both concert and sight-reading in regions throughout the state. This could be partially attributed to the fact that high schools with beginning tenor-bass choirs have higher enrollments and/or more established directors and programs. Further study is recommended to see if elevation of tenor-bass choir scores is perhaps occurring to help males feel more successful in an effort to offset dwindling male enrollments in many choral ensembles.

U.I.L. contest ratings can be impacted by a number of variables including: literature selection, director experience or teaching skill, students' musical background, district support for music programs, number of directors on staff, size of choral program or choir, student eligibility, and director length of tenure at school. All of these factors, as well as possible unidentified variables, should be taken into consideration when examining the research findings.

Further research of the impact of SES on musical achievement is needed. The scope of this study was limited, in that it represented only seven regions over a one-year period of U.I.L. contests and judging panels. Recommendations for additional studies include completing a longitudinal study representing all regions in Texas over a five-year period and/or including contest ratings from other states' choral contests. In addition, examination of characteristics of

directors who are successful at contests and teach at low socioeconomic schools may provide relevant data.

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# Retrospective Instrument Choices Among Middle School Band Members

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The factors influencing student selection of musical instruments has been of ongoing interest to the research community as well as to music practitioners (Abeles & Porter, 1978; Bruce & Kemp, 1993; Delzell & Leppla, 1992; Fortney, Boyle, & DeCarbo, 1993; Griswold & Chroback, 1981; Hallam, Rogers, & Creech, 2008; Harrison & O'Neill, 2000; Sinsel, Dixon, & Blades-Zeller, 1997; Zervoudakes & Tanur, 1994). Of particular continuing interest has been the possibility of gender stereotyping in instrument selection (Abeles, 2009a; Abeles, 2009b; Conway, 2000; Johnson & Stewart, 2004; 2005; Killian & Satrom, 2009). Recently Eros (2008) published an extensive review of literature regarding gender stereotyping in instrument selection, adding further emphasis to the continuing interest in this topic.

Upon determining that there was a definite difference in the involvement of males and females in bands and orchestras (a larger percentage of males in bands and females in orchestras), Abeles and Porter (1978) sought to determine if gender stereotypes were present among adults and at what age the stereotypes develop. The adults indicated gender associations for several instruments. They associated the flute, violin, and clarinet with girls, and drums, trombone, and trumpet with boys. Abeles and Porter also found that gender associations were not as prevalent in young children, but became more evident around the third grade.

Delzell and Leppla (1992) found that fourth-grade students showed similar associations to those identified by Abeles and Porter. After viewing posters of the instruments with the photos of the performers covered, males preferred the drums the most, followed by the saxophone. Girls preferred the flute, saxophone, and clarinet. These results not only revealed that there are gender preferences for certain instruments, but there are also instruments that may have no specific gender association (saxophone). With the exception of the saxophone, Griswold and Chroback (1981) concurred, finding that college students thought the harp, flute, and piccolo to be most feminine and the saxophone, drums, and trumpet to be most masculine. Recent research (Abeles, 2009a) has revealed that the stereotyping apparent in studies conducted in the 1970s (Abeles & Porter, 1978) and in the 1990s (Delzell & Leppla, 1992) remains virtually the same.

The factors that affect a student's choice of instruments have been examined. Both Abeles (2009b) and Conway (2000) confirmed the role of parents in instrument selection. The influence of the music director has been assumed to be an influential factor (Eros, 2008). To further examine the role of the band director regarding instrument selection, Johnson and Stewart (2004; 2005) surveyed groups of music educators to determine if gender or race played a role in the way

directors assigned instruments to students. The results revealed that there was no significant relationship between gender and any particular instrument assignment, leading Johnson and Stewart to conclude that these directors did not appear to be deliberately assigning instruments based on either gender or race.

Timbre has also been studied as a factor affecting instrument choice. Surveying sixth through ninth-grade band students, Fortney, Boyle, and DeCarbo (1993) found that the sound of the instrument was the most frequently chosen reason students gave for their instrument selections. Others, however, found no significant differences when comparing timbre preferences according to gender (Rideout & Clinton, 1987).

The influence of the gender of the demonstrator on instrument selection among children has been explored (Bruce & Kemp, 1993; Harrison & O'Neill, 2000; Killian & Satrom, 2009). Killian and Satrom (2009) asked six classes of kindergarteners, $3^{rd}$ graders and $5^{th}$ graders to select the instrument they would most like to play from a picture of six common band instruments (flute, clarinet, alto saxophone, trumpet, trombone and tuba). Subsequently, each intact class viewed a live demonstration of each instrument by either all female performers or all male performers. Following the brief demonstration of each instrument the students again indicated which instrument they would most like to play by circling the instrument pictures on a worksheet. Results indicated that for all ages, females who viewed female performers selected significantly more woodwind instruments, while males who viewed male performers selected significantly more brass instruments. When females viewed male performers or when males viewed female performers, each tended to select a variety of choices within brass and woodwinds.

Given the studies that have noted influential effects of parental wishes, director recommendations, gender stereotyping of instruments, and preference for specific timbres we designed a study to further explore factors that influence student instrument choice. In this current study we simply asked young musicians why they chose their instruments, how well they liked that instrument and had them speculate as to what their second choice might be.

Method

Participants consisted of 268 middle school band members (grade 6 = 108, grade 7 = 92, grade 8 = 88; 139 males and 129 females) from a single suburban middle school consisting of homogeneous beginning instrument classes as well as multiple full bands. Participants were in their first to third years of playing an instrument. Participants included all band students present on the day the research questions were distributed during early fall 2009. One of the researchers served as the regular instructor for these students, so all students were familiar with her, and all normal class procedures were followed. The particular research questions were part of the normal procedures the band directors used to get to know their students and to track student progress. The questions were handed to students during a regular rehearsal time, read to them by the instructor and were then collected as soon as they were finished. Names were on the surveys for the directors' use, but were not recorded nor analyzed. Thus no individual students were identifiable.

The wording of the questions was piloted with a group of expert educators (*N*=6) for clarity, content, and age appropriate language. The questions asked the students to list the instrument they were currently playing and why they chose that instrument. Specific instructions reminded them to "please say something besides 'because I like it.' Why do you like it?" We also asked them to how well they liked that instrument using a Likert scale of 1 (not very well) to 7 (very

well) in an effort to quantify and verify written comments. The survey appears in Figure 1.

_____

**Current Band Students**

Name _____

Grade 6 7 8
Gender: Male Female
Band instrument currently played: _____

    1.   In the space below, please explain why you chose the band instrument you now play. Explain your answer. (Please say something besides "because I like it." Why do you like it?

    2.   How well do you like your present instrument?

            Not very well 1  2  3 4 5 6 7 Very well

    3.   If you weren't playing your current instrument, which other band instrument would you want to play? Why? (Please say something besides "because I like it." Why do you like it?)

    4.   How well would you like the instrument you chose in Question #3?

            Not very well 1  2  3 4 5 6 7 Very well

*Figure 1:* Questions Distributed to Middle School Band Students
_____

A second question asked "If you weren't playing your current instrument, which other band instrument would you want to play? Why?" This question was followed by the same Likert scale, on which students rated how well they liked the instrument chosen second. These questions allowed us to determine students' current instruments and to examine what other choices they might make now that they have been in band for a period of time and presumably might be more familiar with all the instruments.

Our chief purpose in asking these questions was to determine what factors influenced band members' instrument decisions. We contemplated asking additional demographic questions such as whether they had relatives who played instruments or whether parental wishes influenced their decisions, but we elected to use a completely free response format so that our questions would tend to not affect their answers in any way.

Results

Data consisted of both free responses and ratings from the Likert scale questions. Free responses were collected regarding the question "Why did you choose this instrument?" as well as "What other band instrument would you choose?" We examined the free responses to determine emerging categories and then merged the categories into themes. Table 1 allows examination of the specific categories. Table 2 allows examination of the themes resulting from merging the categories. Both tables present the data in terms of frequency of occurrence.

Table 1
*Categories of reasons for selecting instruments in order of frequency of mention*

| Reasons | Instrument #1 Question #1 | Instrument #2 Question #2 |
|---|---|---|
| Way instrument sounds | 66 | 81 |
| Family members played/encouraged | 38 | 20 |
| Fun/Cool | 33 | 35 |
| Encouraged by Director | 30 | 0 |
| Audition success | 29 | 8 |
| Perceived ease of playing | 25 | 26 |
| Challenging/learn new things | 22 | 18 |
| Way instrument looks | 21 | 21 |
| Styles played by instrument | 16 | 20 |
| No answer/undecipherable | 14 | 35 |
| Friends played/encouraged | 9 | 7 |
| Always wanted to play/already owned | 7 | 10 |
| Select group chosen to play | 5 | 0 |
| My favorite | 2 | 21 |
| | | |
| TOTAL for 268 students | 317 | 302 |
| Note: Students could list multiple reasons | | |

Table 2
*Themes of reasons for selecting instruments (collapsed similar categories)*

| Themes (collapsed reasons) | Instrument #1 | Instrument #2 |
|---|---|---|
| **Characteristics of the Instrument Itself** Way instrument sounds, looks; ease of playing; styles played by this instrument | 128 | 148 |
| **Influence of Others** Family members; director; friends | 77 | 27 |
| **Self Comments** Audition success; challenging; always wanted to play; among chosen select group | 63 | 36 |
| **Generalized Positive** Fun; cool; favorite | 35 | 56 |
| **No Answer/ Indecipherable** | 14 | 35 |
| | | |
| Total | 317 | 302 |

Themes included: Characteristics of the Instrument Itself (the way the instrument sounds, perceived ease of playing, the way the instrument looks, and the styles played by the instrument). Frequency of mention involving the characteristics of the instrument included: 1st instrument choice = 128; 2nd instrument choice = 148. A second category involved Influence of Others. This category included family members, director and friends (1st = 77, 2nd = 27). Comments about Self was a third theme which included audition successes, challenge of learning new things, always wanted to play and already owned the instrument, and a desire to be a member of a select group chosen to play (1st = 63, 2nd = 36). Generalized Positive comments included fun, cool, my favorite (1st = 35; 2nd = 56). No answer or indecipherable answers were also tabulated (1st = 15; 2nd = 35).

Categories allowed us to compare students' reasons for playing their current instrument with reasons for their choice of a second instrument. We concluded that students most frequently reported that the theme Characteristics of the Instrument Itself influenced instrument selection more than the other themes did ($X^2 [4,619] = 249.13, p < .01$) in both the first and second instrument selections. For the instrument chosen second, students tended to report that the themes Influence of Others and Comments About Self influenced their second instrument choice less often than those themes impacted students' first instrument choice. Responses related to the theme Generalized Positive Comments tended to occur more frequently in the 2nd instrument choice than in the 1st instrument choice. When responding to the question, "Why did you choose this instrument?", students opted not to respond more than twice as often for their 2nd instrument than they did for their 1st instrument.

Ordinal data of preference for selected instruments were collected using Likert scales (7= like very well; 1 = not very well). Analysis of these data revealed that students rated their preference for their 1st instrument higher ($M = 5.88$) than their preference for their second choice ($M = 5.50$); the Wilcoxon Signed Rank test revealed that the differences between preference ratings were significant, $Z(1, 268) = -2.58, p < .01$. We used Kruskal-Wallis tests to determine if a relationship existed between students' grade in school and their preference ratings for each

instrument. We found significant differences between grade and preference ratings only for Instrument #1, $H(2, N=268) = 11.63$, $p < 0.01$, $M_{Grade\ 6} = 6.25$, $M_{Grade\ 7} = 5.54$ and $M_{Grade\ 8} = 5.75$.

We were interested in which particular instruments were chosen. Table 3 and 4 indicates the selection frequency of specific instruments (1st choice and 2nd choice) as well as collapsed data regarding families of instruments chosen.

Table 3
*Frequency of individual instrument x gender*

| Instrument- 1st choice | Male | Female | Total 1st Choice | Instrument- 2nd choice | Male | Female | Total 2nd Choice |
|---|---|---|---|---|---|---|---|
| Trumpet | 35 | 13 | 48 | Trumpet | 12 | 4 | 16 |
| Clarinet | 17 | 29 | 46 | Clarinet | 6 | 22 | 28 |
| Flute | 4 | 34 | 38 | Flute | 6 | 20 | 26 |
| Percussion | 19 | 10 | 29 | Percussion | 54 | 32 | 86 |
| Saxophone | 15 | 12 | 27 | Saxophone | 32 | 24 | 56 |
| Trombone | 21 | 4 | 25 | Trombone | 2 | 5 | 7 |
| Euphonium | 11 | 2 | 13 | Euphonium | 4 | 1 | 5 |
| French Horn | 3 | 11 | 14 | French Horn | 2 | 1 | 3 |
| Tuba | 9 | 3 | 12 | Tuba | 6 | 0 | 6 |
| Oboe | 1 | 6 | 7 | Oboe | 3 | 10 | 13 |
| Bassoon | 2 | 4 | 6 | Bassoon | 4 | 1 | 5 |
| Bass Clarinet | 1 | 1 | 2 | Bass Clarinet | 2 | 0 | 2 |
| Baritone Sax | 1 | 0 | 1 | Baritone Sax | 0 | 0 | 0 |
| TOTAL | 139 | 129 | | Piccolo | 0 | 1 | 1 |
| | | | | Piano | 0 | 2 | 2 |
| | | | | Nothing | 6 | 6 | 12 |

Table 4
*Frequency of instruments x gender x instrumental families*

| Families- 1st Choice | Male | Female | Familes-2nd Choice | Male | Female |
|---|---|---|---|---|---|
| Woodwinds | 41 | 86 | | 52 (32 = sax) | 77 (24 = sax) |
| Brass | 79 | 33 | | 26 | 11 |
| Percussion | 19 | 10 | | 54 | 32 |
| Other | 0 | 0 | | 1 | 3 |
| Nothing | 0 | 0 | | 6 | 6 |
| | | | | | |
| TOTALS | 139 | 129 | | 139 | 129 |

Of particular interest in our ongoing investigation is the potential gender stereotyping of instrument choice. Using Abeles (2009a; 2009b) data regarding cross-gendered instrument choices, we examined preference divided by player gender. Analysis of gender by whether the second choice stayed in the instrumental family revealed that students tended to change families with their second choice. Females, however, changed instrument families 54.69% of the time while males changed instrument families 72.99% of the time. See Table 5.

Table 5
*Change in instrument families from 1st to 2nd choice*

| Original Instrument | Male | Female | Changed to Brass | Changed to Woodwind | Changed to Percussion | Other | Nothing |
|---|---|---|---|---|---|---|---|
| Trumpet | 35 | 13 | 4 | 18 | 23 | 0 | 3 |
| Clarinet | 17 | 29 | 2 | 22 | 21 | 0 | 1 |
| Flute | 4 | 34 | 6 | 20 | 11 | 0 | 1 |
| Percussion | 19 | 10 | 5 | 21 | 0 | 1 | 2 |
| Saxophone | 15 | 12 | 2 | 11 | 12 | 1 | 1 |
| Trombone | 21 | 4 | 9 | 11 | 5 | 0 | 0 |
| French Horn | 3 | 11 | 2 | 6 | 3 | 1 | 2 |
| Euphonium | 11 | 2 | 1 | 5 | 6 | 0 | 1 |
| Tuba | 9 | 3 | 4 | 4 | 4 | 0 | 0 |
| Oboe | 1 | 6 | 1 | 6 | 0 | 0 | 0 |
| Bassoon | 2 | 4 | 1 | 3 | 1 | 0 | 1 |
| Bass Clarinet | 1 | 1 | 0 | 2 | 0 | 0 | 0 |
| Baritone Sax | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
|  |  |  |  |  |  |  |  |
| TOTAL | 139 | 129 |  |  |  |  |  |

## Discussion

The most frequent reason given for choosing an instrument was related to preference for a specific timbre, a finding that concurs with those of Fortney, Boyle, and DeCarbo (1993). Remarkably, this single reason was mentioned significantly more frequently than any other reason (147 mentions vs. 58 mentions for influence of family members, the next most frequent single category response). These students simply "like how the instrument sounds."

Not surprisingly, the opinion of parents, directors, and to a lesser extent friends appeared as a powerful influence (total of 104 mentions). Notably, the opinion of others was not cited as frequently on the 2nd choice instrument (27) as it was for the 1st choice (77). Perhaps parents and

directors influence 1st instrument choices, but when given the chance to make a second choice, these middle schoolers did not indicate they considered the opinion of others as strongly.

It is interesting that the number of generalized positive comments made for the free response questions occurred more frequently in the 2nd instrument choice situation than in the 1st. Perhaps related are the findings that more than twice as many students gave no response as to why they chose their 2nd instrument and that the number of general, non-specific positive comments for the 2nd instrument choice increased. These results may indicate that explaining why one likes something may be a harder task for this age group than simply choosing what one likes. The question of how students of differing ages determine a reason for a specific preference and how researchers may effectively examine that reasoning could be an area of future research that may interest both researchers and practicing music educators.

The specific instrument chosen by students was of interest. Examination of Table 3 revealed that students' original choices reflected a fairly balanced band (winds, brass, percussion)., Students' 2nd instrument choice, when considered in terms of ensemble instrumentation, yielded unbalanced results, with a much larger number of students choosing percussion (86 students selected percussion as their 2nd choice, 29 students chose that family as their 1st choice) or saxophone (56 students' 2nd choice, 27 students' 1st choice). Conversation with the participants' band directors revealed that a majority of 6th graders initially want to play percussion or saxophone. Clearly, students do not ultimately choose those preferred instruments (See Table 3), as only 30 (4.84%) of the 619 number of total reasons given for choosing an instrument mentioned the director's influence as a contributing factor.

Likert scales indicating students' preferences for their first and second choices revealed few surprises. Overall, students liked their instruments. Seven people, following their 1st instrument choice, selected 1 (did not like instrument) and 12 selected the same rating following their 2nd instrument choice. They might possibly have been influenced by parent or director recommendations on choice 1; but one might question why they would select that rating for choice 2 if they could choose any instrument they wanted to on the second choice. Perhaps they thought they were choosing the top of the scale rather than the bottom, although examination of Figure 1 would seem to indicate that the selections were well defined.

Examination of which instruments were chosen second and which students changed instrument family with that second choice yielded some intriguing preliminary results worthy of further exploration. While students tended to change instrument families with their 2nd choices, males changed 72.99% of the time while females only switched families 54.69% of the time. Further analysis might examine whether those playing cross-gendered instruments (Abeles, 2009b) also chose cross-gendered instruments as their 2nd choice.

Although these results examine the instrument choices of a reasonably large, homogeneous group of middle school students, generalizations should be made with caution to other more varied populations in different geographical locations. It should also be remembered that these student responses were gathered on a single day from intact groups, and may have been subject to unknown peer influences, or might be open to change over time. Longitudinal studies regarding instrument preference, collection of middle school preferences in individual settings rather than in group settings (to control for possible effects of peer pressure), and perhaps interviewing middle school students to further explain their preferences may prove fruitful. Further studies might also examine methods by which band directors achieve balanced instrumentation and the effect that necessity has on instrument selection, preference, and retention. The current study certainly indicates the abundant number of important research

questions that can be addressed within normal rehearsal settings. We urge the continuation of such data-based explorations.

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# Cooperating Teachers' Perceptions of Student Teacher Needs

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Effective teachers have a complex, interactive battery of skills at their disposal that they use to develop the musicians in their program. Research literature has attempted to describe traits of effective teachers through investigations of component parts that are evident in those teachers that have been cited as being effective. For instance, Goolsby (1997) compared expert and novice teachers and found experts to be less verbal and more specific in their feedback. And VanWeelden (2002) found that visual characteristics such as teacher dress impacted students' perceptions of effective teaching.

Many studies have described traits of effective teachers through a combination of three basic categories: musical, instructional, and personal; with Kelly (2007) finding musical skills to be rated highest, Rohwer and Henry (2004) finding instructional skills to be rated highest, Rohwer (2009) finding that personality was rated highest, and Teachout (1997) finding that personality and instructional skills were rated higher than musical. Some of these differences in perceptions may be attributed to age, experience or ensemble setting of respondents; high school band students rated musical skills highest (Kelly, 2007), however senior citizen and middle school band students (Rohwer, 2009), pre-service and experienced teachers (Teachout, 1997), and faculty (Rohwer & Henry, 2004) rated musical skills lowest.

In addition, studies have documented field experiences and student teaching as important parts of socialization and skill acquisition involved with becoming an effective teacher (Campbell & Thompson, 2007). perceptions of inexperienced teachers have been investigated to determine their needs in this pivotal time of learning and growth. These studies have found that preservice teachers documented optimistic perceptions of their skill levels (Richards & Killen, 1993), that preservice teachers of all levels were most concerned about the impact that they would have on student learning (Campbell & Thompson, 2007), and that beginning teachers cited increased support as the main need of preservice teachers (Ballantyne & Packer, 2004 ).

While literature has stressed the importance of each of the voices in the student teaching triad (the student teacher, the supervising teacher and the cooperating teacher), "the cooperating teacher has received the least attention as the primary focus" (Zemek, 2008, p. 9). Articles have acknowledged importance of the dialogue and reflection that happens as a result of cooperating teacher's interaction with the student teacher (Krueger, 2006; Stegman, 2007; Strand, 2006), and have investigated the process used to choose cooperating teachers (Zemek, 2008), and have stressed what cooperating teachers should do with student teachers (Fenton & Rudgers, 1988).

Two research studies asked for cooperating teacher input when also asking for the input of other sources; Yourn (2000) documented both preservice teachers' and cooperating teachers' concerns over the novice teachers' classroom management skills, and Conway (2002) documented the agreement of mentor teachers, administrators, and beginning teachers in their desires for a more comprehensive set of courses and an extended student teaching experience. But, there are few investigations that have asked for indepth and focused information from cooperating teachers concerning their perceptions of how the student teaching process works.

The few studies that have asked for cooperating teacher input have tended to investigate student teaching processes. In 1964, Bennie asked cooperating teachers to rate supervising teacher behaviors and found that supervisors tended to cover the student teacher issues a great deal, but were less likely to address the assessment of the students in the classroom. In a non-research article from 1967, Fitzgerald went beyond processes to describe what cooperating teachers wanted in a student teacher; citing issues such as musical skills, humor, admitting mistakes, and flexibility. Additionally, in a qualitative research study of cooperating teachers, Draves (2008) found that power issues were a major theme, with cooperating teachers valuing shared, collaborative partnerships.

There is a need for more information concerning what cooperating teachers think about student teaching and student teachers. It may be important to ask for the guidance of experienced teachers who have served as cooperating teachers, for research has shown that experienced teachers are more critical than less experienced teachers (Madsen & Cassidy, 2005). Specifically, in Texas, where the musical skill level of students is so high, it may be important for experienced teachers to document necessary skills and characteristics of a student teacher preparing for teaching in Texas public schools. The purpose of the current study was to describe the perceptions of cooperating teachers concerning the process, product, challenges, and their vision for student teaching.

## Method

Sixteen experienced teachers from the Dallas-Fort Worth area were interviewed to provide the data for this study. The experienced teachers were middle school ($n = 7$) and high school ($n = 9$) directors from choral ($n = 7$) and band ($n = 9$) settings. 10 males (4 high school band, 2 middle school band, 3 high school choral and 1 middle school choral) and 6 females (1 high school band, 2 middle school band, 1 high school choral and 2 middle school choral) had an average of 19.25 years of teaching (range of 10-32 years, SD = 7.19) and had served as a cooperating teacher for an average of 15.62 student teachers (range of 3-40 years, SD = 9.73). respondents were predominantly Caucasian (n = 17, and 1 African-American), and were an average of 42.18 years of age (range of 33-55 years, SD = 7.42).

Interviews were conducted in face-to-face format ($n = 12$), and also via email format ($n = 4$). Each interviewee was asked 10 open-ended and 3 demographic questions. face-to-face interviews took an average of 60.16 minutes to complete (range of 45 - 72 minutes, SD = 9.97). questions on the interview schedule were assessed for content validity by a panel of three experts in the field of teacher education and ensemble settings. All face-to-face interview content was transcribed and confirmed by an external evaluator for authenticity. Interview material was coded into similar content categories to provide results for the study. It should be noted that the total number of comments for a question topic area may exceed the number of participants due to some respondents' in-depth responses that provided multifaceted, overlapping answers.

Results

Results for the current study cannot be generalized to other cooperating teachers due to the small sample size and purposive sampling used. The results can, however, provide an initial view of a group of cooperating teachers' perspectives on student teaching. Future research would be beneficial from a larger and more widespread group of cooperating teachers so as to direct future knowledge in the area of teacher preparation.

The most common student teacher weaknesses cited by participants in this study were higher-order instructional skills (15 comments), such as breaking down concepts for students, reading the room to modify instructional decisions, being able to digress from a lesson plan to meet students' needs, and being able to manage while also instructing the class. As one cooperating teacher stated, "The student teachers have the skills they need to be good teachers, they just need more time on the podium so that they don't get paralyzed by a lack of real world experience: they are worried with what to say next and then they don't use their ears to hear what is really going on." Musical skills were also cited as weaknesses (12 comments), including "pragmatic, public-school-appropriate, non-collegiate conducting", piano skills, beginning literature knowledge, and secondary instrument skill.

In order to rectify these weaknesses, cooperating teachers cited the need for additional collegiate experiences in contextual teaching (14 comments) including additional classes with onsite observations and teaching, classes that experience UIL, and classes that deal with the "nuts and bolts' of real world teaching. Additional instruction in musical issues was also cited (10 comments), including lab groups using secondary instruments, improvisation experience, accompanying experience, and beginning literature courses. The cooperating teachers stated that high school, prospective teachers may be able to get a head start with remedying weaknesses through theory classes (10 comments), serving as a teaching aid (6 comments), Future Music Educator program participation (5 comments), or taking piano lessons (3 comments).

The greatest challenge that cooperating teachers noted with having a student teacher in their schools was getting the student adequate podium time (12 comments). As one cooperating teacher stated, "I struggle with balancing the need for the ensemble to be musically prepared and the need for the student teacher to be able to teach, make mistakes, and learn from the mistakes. This is a delicate balance." Communication between the supervising teacher and the cooperating teacher was also cited as problematic (4 comments).

When asked specifically about the greatest challenge that they experienced in working with the supervising teacher, communication was the most common response across the cooperating teachers (10 comments), followed by the need for clear expectations in the evaluations of the student teacher (5 comments), the need for more observations of the student teacher (3 comments), and the need for respect of the site and the cooperating teacher's decisions (2 comments).

When asked about their dealings with student teachers who do not appear to have an appropriate teacher personality, the most common response was to handle the student on an individual basis, sequencing steps for them to progress (11 comments), including teaching them to learn to act out facial expressions that they can apply in class, mentoring them on how to hide their specific weaknesses, and exposing them to social settings with the students so that they can come out of their shell. As one cooperating teacher stated, "I can break down the steps they need to do to achieve for the introverts. Those who don't want to be teachers are more troublesome for me. I don't want to give up my class for that." And, yet, another cooperating teacher added, "Some great directors have terrible personalities. People compensate for their weaknesses in a

variety of ways. Personality can impact retention, but if you are an amazing teacher and musician you can be successful."

When asked how universities should handle undergraduate music education students who do not appear to have an appropriate teacher personality, the most common response was for university faculty to discuss with those students early on concerning how their personality may not be a match with music education (9 comments). As one cooperating teacher stated:

> Advisory feedback is needed with options given to students about other possible degrees and professions. The greatest challenge I see with this idea, though, is that they may have many faculty across the program but in many cases, no one may really know them and track them across the whole program. They could fall through the cracks until it would be too late.

Other cited solutions that universities could consider were the use of personality tests (3 comments), taking acting and leadership classes (3 comments), and teaching more throughout the program to get more feedback (2 comments).

When asked the global question of their vision for how student teaching should "really work" the cooperating teachers tended to agree that if student teachers came to student teaching with a high degree of preparation, that would make the experience better from the start (14 comments). Once in the student teaching setting, cooperating teachers wanted student teachers to experience as much as they could in order to help them be successful in their first teaching job. One other common statement concerned logistics of student teacher placement in two sites across the period of student teaching (8 comments); the cooperating teachers felt that scheduling decision of when the student is in each site should be made in conjunction with public school cooperating teachers and the student teacher so that the most appropriate decisions could be made. As one cooperating teacher stated, "sometimes I get the student teacher in the second half of the fall semester when we are already in full swing; it probably would have been better for them to spend half their day in each school so they could see starting procedures in each setting. That would have been best for the student."

The most common debate was how to get all of the experiences that student teachers need across the year when student teaching is only one semester. Six cooperating teachers felt the best solution was for student teaching to span across one year. As one cooperating teacher stated:

> In most careers, like a doctor, internships are longer. Give them a stipend and make the experience longer. You really can't be a teacher who is ready to take on their own program without experiencing starting a program in the fall and UIL preparations in the spring: especially if you aren't from Texas.

Other cooperating teachers felt that one semester sufficed. As one cooperating teacher stated, "I don't want to give up my class for a year and student teachers don't get paid. They learn in a semester what they need from me, and then they need to move on." As another cooperating teacher stated:

> They need to observe a lot in their classes so that they see how to start beginners and they see UIL. Student teachers also need to take the initiative to start early if they are in the fall, or stay late in the spring, so that they get the most of their time in the setting.

Conclusions

The current study findings highlight complicated issues associated with student teachers, cooperating teachers, and supervising teachers. Extensive interaction and directed communication between these three entities both before and during student teaching may help make the student teaching time a productive and enjoyable one for the student teacher. Further research on this multifaceted partnership may add ideas to hone and develop the relationship between student teacher, cooperating teacher and supervising teacher.

Since higher order instructional skills were documented as the most common weakness of student teachers as they enter student teaching, universities may want to consider adding to their curricula as many teaching experiences as possible in contextual settings that will allow for real world problem solving. These experiences could also help to improve the musical weaknesses that were cited by the cooperating teachers. Since students differ in their weaknesses, having regular diagnostic measures to assess progress in teaching and musicianship may help instructors organize experiences that can meet student-specific needs. For instance, if one student needs extra practice with piano skills and another needs extra work on clarity of conducting, and yet another student needs practice on giving appropriate feedback, a lab experience teaching opportunity could be set up that would have the one student accompanying while the other student is conducting and the third student is providing verbal feedback as the external evaluator.

In addition to these skill-based needs, the cooperating teachers noted that students should experience the school environment, such as attending UIL, before student teaching. University instructors may benefit their students by contacting area region chairs to see if the university students could help with fall all state auditions or spring solo and ensemble or UIL as monitors in the contest and sight reading rooms. While many Texas university students have experienced UIL as high school students going through the system, having students view the process through a teacher lens may help them in their student teacher preparations. As a further preparatory move, high school students can be encouraged to improve their prospects as music educators through experiences in leadership positions and teaching in a variety of settings, whether it be church, karate, or private music lessons. Having high school and even middle school teachers discuss career issues and ask for students to self-assess their interest in teaching could help young students consider and act upon the broad musicianship needs that are required of music teachers. Also, having teachers of all levels have their students conduct, play piano, and assist in the assessment of group learning could help improve broad musicianship skills for all students enrolled in ensembles.

For university faculty, it may be important to realize that proactive and regular communication needs to be conducted so that cooperating teacher feels like their voice is getting heard in the student teaching process. Making contact directly with the cooperating teacher and cc'ing all observation information to the cooperating teacher may help aid the teamwork mentality and ease the student teacher's feeling of being caught in the middle. Communicating all expectations, rubrics, and feedback measures to both the student teacher and the cooperating teacher, as well as discussing and implementing the cooperating teacher's scheduling preferences for the student teacher may also help in the positive working conditions between the three entities. Once in the setting, having the university supervisor show deference for needs of the setting may be of importance to cohesive and productive workings involved in student teaching. That may mean that the supervisor will need to put aside his/her concept of rightness in favor of deferring to what will work in the interest of the setting and the student teacher.

Universities may also want to consider the best measures for helping those students who may not have an ideal teacher personality. Whether it is advising students regularly or having them take acting classes, protocol need to be in place so that students can be advised appropriately. Especially since students may have many faculty members across their time in a university program, protocol may involve documenting any concerns that a faculty member may note in a class with a student, and then having these concerns be reviewed by all music education faculty so that trends can be noted as a tracking measure across the program.

For those students who clearly don't want to go into teaching, advising them early into another field may benefit the student teaching settings. Since students who do not want to teach can be a drain on cooperating teachers, it may be important to have the students find out early, through teaching in authentic teaching sessions that the career is not for them; the students might, then, have the time to find their true passion. For those students who unfortunately get to the end of their program and realize that they do not want to teach, advising those students concerning the options available to replace student teaching with courses that would allow them to get the degree without certification may be the best way to avoid burning out cooperating teachers by placing students with them who have no desire to go into music.

Since early preparation of students before student teaching was stated as the most efficient way to have student teaching be a successful endeavor, music educators at each level may want to consider how they can educate the whole musician so that they have the best chance to excel in teaching. In addition, for those universities that cannot change their student teaching class to a year-long structure, it may be beneficial to consider how to integrate fall public school issues into classes for those who will be student teaching in the spring, and spring public school issues into classes for those who will be student teaching in the fall. This by no means is an easy endeavor, but it may be the best way for music education graduates to feel prepared in their first experience as a teacher in the field.

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