**An Examination of Factors Contributing to Orchestra Students' Attrition in Transition From Elementary to Middle School**

**by**

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**Abstract**

The purpose of this study was to determine what factors contribute to orchestra students' attrition when transitioning from elementary to middle school. The factors that were examined included: 1) student perceptions about their elementary orchestra program, 2) student perceptions about the middle school orchestra program, 3) middle school scheduling, 4) parental support, 5) peer influence, 6) student perceptions about their own playing, 7) continued participation in school music outside of orchestra, and 8) continued participation in music outside of school. Categorical variables such as gender, instrument, race, elementary and middle schools attended, socioeconomic status and academic achievement were also examined.

This study was limited to studying sixth grade students from a single school district who discontinued orchestra participation when entering middle school in the fall of the 2012-2013 school year. These students matriculated from nine K-5 elementary schools and were identified as having completed three years of string study in their elementary school. The school was located 30 minutes outside of a large metropolis in New England.

Participants were invited to complete an online questionnaire to examine their perceptions of their elementary orchestra program and the middle school orchestra program. The questionnaire was organized into three sections and contained 42 items. Section one contained 24 items relating to parental support, motivation, students' perceptions about their own playing and their elementary school orchestra experience. Responses from section one were summed to create the Elementary Orchestra Experience Scale (EOES). The EOES had good internal consistency, with a Cronbach's alpha coefficient of .84. Section two contained 12 questions and the responses in section two were summed to create the Middle School Orchestra Perceptions Scale (MSOPS). The MSOPS had good internal consistency, with a Cronbach's alpha coefficient

of .74. Section three contained six “yes” or “no” questions. Scores from the EOES and MSOPS were examined based on categorical variables including gender, instrument, elementary and middle schools attended, race, socioeconomic status and academic achievement.

Data analysis revealed that 75% of the respondents indicated that they did not participate in middle school orchestra because they preferred to take other elective classes. Eighty percent of the respondents indicated that they joined their school chorus or band instead of orchestra (50% joined the school chorus, 30% joined the school band). Also, the data suggested that parents’ lack of support for the orchestra program was a contributing factor to attrition. Only 45% percent of the participants indicated that their parents tried to convince them to stay in orchestra. Data suggested a lack of peer support for orchestra when transitioning into middle school. Respondents indicated that they did not like to practice at home. No significant differences were found in respondents’ scores based on gender, instrument, race, schools attended, socioeconomic status and academic achievement and the ESOS and MSOPS scores.

# Chapter I

## Introduction and Rationale

Enrollment and attrition rates in public school instrumental music programs are of interest and concern to music educators, researchers and administrators. Colwell and Goolsby (1992) assert that a high attrition rate is a negative reflection of an instrumental music program. While some attrition is to be expected, a large percentage of students discontinuing their music participation can jeopardize music education on a national scale, and threaten music teachers' employment. Kruth (1964) stated that if increasing numbers of students drop out of instrumental music, there will be fewer artistically oriented citizens to appreciate, understand, teach, and play good music.

Many studies have examined the factors that contribute to retention and attrition rates in instrumental music education (Corenblum & Marshall, 1998; Hamann & Gillespie, 1998; Hartley, 1996; Klinedinst, 1991; Kuhlman, 2005; Martignetti, 1965; Solly, 1986; Witt & Goodrich, 2003). The findings from these studies show that the reasons for attrition in instrumental music are varied. Prior research has compared attrition from the teacher, parent and student perspective (Martignetti, 1965). Many researchers would agree that there is no single factor for a student's decision to quit (Brown, 1996; Corenblum & Marshall, 1998; Hamann & Gillespie, 2009; Hartley, 1996; Kinney, 2009; Klinedinst, 1991; Martignetti, 1965; Morehouse, 1987; Perkins, 1998; Solly, 1986). Themes in prior research suggest six categories that influence attrition in music programs: 1) a new teacher when changing schools, 2) socioeconomic status, 3) motivational reasons (including family, peer, and self), 4) scholastic achievement, 5) the grade level in which instruction begins, and 6) scheduling conflicts.

A large body of literature relating to retention and attrition has focused specifically on

band students and their continuation of music study through high school (Anthony, 1975; Brown, 1996; Corenblum & Marshall, 1998; Frakes, 1984; Koutz, 1987). Researchers have called for further investigation into enrollment and retention in string programs (Hamann & Gillespie, 1998; Hartley, 1996; Klinedinst, 1991; Solly, 1986; Wragg, 1974). Researchers in string education have examined attitudinal factors related to dropout and retention in beginning string classes (Morehouse, 1987). Researchers have also examined the degree to which selected personality variables influence the retention of students in string orchestra programs (Cutietta & McAllister, 1997; Mowery, 1993). However, there is currently a lack of literature on attrition rates of string students transitioning from elementary to middle school orchestra. The average national orchestra student attrition rate is 27% between elementary and middle school (Hamann & Gillespie, 2002).

Several studies have identified significant dropout rates when students changed from one school building to another (Allen, 1981; Hartley, 1996; Solly, 1986; Wolfe, 1969). Hartley (1996) defined two types of school settings: a *unified* school setting was defined as a school system that houses grade five and grade six students in the same building, and a *split* school setting was defined as a school system that houses grade five and grade six students in different buildings. Studies have examined the implications of this unified vs. split school setting and found that although there is no significant difference in initial enrollment in music education between the two school settings, dropout rates were higher when students moved from one school building to another at the end of fifth grade (Hartley, 1996). Research suggests a possible relationship between school structuring and dropout rates from instrumental music programs (Brown, 1996; Hartley, 1996; Wragg, 1974). Attitudes are most receptive to change at times of transition or change in instruction, like moving from elementary to middle school (Brown, 1996).

Similarly, students' perceptions of the new teacher also played a large role in students' decision to continue instrumental music study (Anthony, 1975; Dunahoo, 1975; Morehouse, 1987; Perkins, 1998). String teachers who identify themselves as strict and authoritarian in attitude have low dropout rates in their programs (Morehouse, 1987).

Both internal and external motivators play a factor in a child's decision to continue instrumental music study (Brown, 1996; Corenblum & Marshall, 1998; Hallam, 1998; Kinney, 2009; Martignetti, 1965; Mowery, 1993; Moyer, 2010). In some cases, students are motivated by their parent's influence, some by their peers, and others by their own, self-motivational factors. Parents who hold an overall more positive attitude were more likely to have children who continued in music study (Brown, 1996; Corenblum & Marshall, 1998; Moyer, 2010). Moreover, students coming from musical families exhibit positive attitudes and possess good self-concept regarding music (Klinedinst, 1991).

Brown (1996) wrote that, "a student's attitude may be influenced by another student's attitude, especially when the other student is admired or perceived as being of high status" (p. 3). Hallam (1998) observed that older children might be more influenced by their peers, and younger children might be more swayed by their parents and teachers. Several studies have discovered that attrition rates in boys are higher than in girls (Kinney, 2009; McCarthy, 1980; Mawbey, 1973). Consistent with McCarthy's findings, Kinney revealed that females were approximately twice as likely as males to be enrolled in band (2009) and suggests that possible gender perceptions towards music in schools might have an influence on this statistic. Findings indicate that males hold gender-stereotyped perceptions regarding music class, and music can be viewed negatively by boys because it is regarded as feminine (Kessels, 2005; Kinney, 2009).

Studies show that the best predictors of students dropping out of a string program are directly related to how children perceive information. Students with less developed perceptive ability are more likely to drop out of the string program (Mowery, 1993). Children who experience failure are likely to become unmotivated and lose interest (Hallam, 1998).

**Purpose and Research Questions**

Prior research has examined the factors that influence retention and attrition of students in string programs. Very little research exists that examines the factors that influence attrition of elementary string students as they transition to middle school. A study that examines the critical transition period from elementary to middle school will inform string education practice by helping string music educators understand the factors that compromise enrollment and retention in orchestra programs between elementary and middle school, and ultimately help teachers keep attrition rates low in orchestral programs.

The purpose of this study was to determine what factors contribute to orchestra students' attrition when transitioning from elementary to middle school. Several factors influencing attrition have emerged from prior research. The selected factors that were examined in the current study were:

1) Student perceptions about their elementary orchestra program
2) Student perceptions about the middle school orchestra program
3) Middle school scheduling
4) Parental support
5) Peer influence
6) Student perceptions about their own playing
7) Continued participation in school music outside of orchestra
8) Continued participation in music outside of school

**Scope and Limitations of the Study**

This study was limited to surveying sixth grade students from a single school district who

had elected to discontinue orchestra participation when entering middle school in the fall of the 2012-2013 school year. These students matriculated from nine K-5 elementary schools and were identified as having completed three years of string study in their elementary school. The school district being examined contained eleven elementary schools, three middle schools and one high school, and was located in a New England town 30 minutes outside of a large metropolis.

**Expectations**

If students are found to have a positive perception of their elementary orchestra experience but a negative perception of the orchestra at the middle school, than it may be possible to identify what variables are negatively impacting the students' perception of the middle school program. Interventions can then be recommended to help ameliorate the transition between elementary to middle school. While some attrition is to be expected between elementary and middle school, a large percentage of students discontinuing music study can negatively impact a music program or even force a school to discontinue course offerings.

**Summary**

Previous research has shown that factors contributing to attrition in instrumental music programs are varied. Several themes have emerged from prior data that suggest why students discontinue their music participation, however, very few researchers can pinpoint the exact causes. Given the current lack of literature on attrition rates of string students, researchers have called for further study into enrollment and retention in string programs. A study that examines the perspectives of sixth graders who have discontinued their string instruction may provide insight as to why students have discontinued their orchestra participation. The results of this study are intended to provide constructive feedback for string teachers in order to better the public school orchestral programs and inform string teachers of the factors that contribute to

attrition. Teachers who are well informed of the factors that contribute to attrition can take steps to prevent their students from dropping out of the music program.

# Chapter II

## Review of Literature

Research in music education has compared the attitudinal differences between participants, non-participants and former participants of instrumental music classes. Student attrition rates in instrumental music programs when moving between grade levels have been explored. Researchers have also examined the factors that predict student attrition rates in instrumental music. All six studies discussed in this chapter address different aspects of the research questions for this study and/or are similar in methodology and participant sample, which is why they were chosen to be reviewed thoroughly. This chapter will review literature related to the current study in three categories: studies on student attrition in music education; studies on student attrition in string programs; studies on attrition in instrumental music when moving between grade levels. The chapter will conclude with a summary of the findings from prior research.

## Student Attrition in Music Education

A certain amount of attrition in music programs is expected, and sometimes, the reasons students dropout are beyond the control of the music director (Mixon, 2007). The average national orchestra student retention rate is 73% between the first and second year of study, and another 73% between elementary and middle school (Hamann & Gillespie, 2002).

Many of the reasons cited for attrition in music education research are consistent in the research literature; however, they may not necessarily be the reverse of the reasons given for continuing (Perkins, 1998). Early research into music education that examined factors that contribute to attrition include: Loss of student interest (Dunnahoo, 1975; Lax, 1966; Martignetti,

1965; Wolfle, 1969), poor relationship between student and teacher (Anthony, 1974; Dunnahoo, 1975; Lax, 1966), and schedule conflict (Anthony, 1975; Dunnahoo, 1975; Lax, 1966).

Koutz (1987) conducted a survey of sophomores and juniors from three Central Missouri high schools. His survey measured and compared morale among current participants, non-participants and former participants in music performance ensembles in small, medium and large high schools, and also examined the student attitudes and enrollment choices toward music performance classes. He had 11 specific research questions:

1) Are there differences in the self-concept of status among current music students, former music students and non-music students?
2) Are there differences in the self-concept of aspiration among current music students in the small, medium and large school?
3) Are there differences in the self-concept of aspiration among current music students, former music students and non-music students?
4) Are there differences in the self-concept of aspiration among music students in the small, medium and large school?
5) Are there differences in the satisfaction of music students toward their music teachers, music classes and music facility in the small, medium and large school and how do these attitudes differ?
6) Is there a difference in satisfaction toward music classes between those now in music and those who have dropped out?
7) Is there a difference concerning perceived treatment of the student by the teachers between music students and those who have dropped out?
8) Are there differences in morale among students in a small medium and large school?
9) How do attitudes toward music performance classes differ among music students, dropouts and non-music students?
10) How does school size relate to student involvement in school-sponsored activities?
11) Do music students belong to more school-sponsored organizations that non-music students?

The target population of this study included sophomore and junior students because music programs at the high school become electives, which clearly divides the student population. In addition, the researcher was interested in the opinions of those students who would soon be enrolling in college music classes.

Classroom teachers administered the questionnaire to 1,485 subjects in September 1986. The number of subjects for each school size was: large school ($N$ = 1030); medium school ($N$ = 261); and small school ($N$ = 194). The schools were selected based on suggestions by recognized leaders in the field of music education, and all of the schools had received AAA ratings by the Missouri State Department of Education and have comparable music offerings. The two independent variables of this study were 1) the current status of the subjects (enrolled, previously enrolled or never enrolled in a music performance class) and 2) school size. The dependent variable in this study was the subject's score on the Student Morale Index (SMMI), a testing instrument adapted from a previous study (Davis, 1971). Koutz used the SMMI to measure the attitudinal differences in students, but a second concern was also to produce an instrument that would measure the forces which motivate a student to participate in or drop out of a music performance group.

The SMMI contained 139 questions, the first 50 questions pertaining to factors of morale. Questions 51-87 pertained to attitudes for joining, not joining or dropping out of a performance ensemble, and questions 88-119 addressed student participation in organizations. Questions 121-127 categorize the student, and questions 128-140 revealed a student's past history in music performance classes and plans for the future.

The results of this research study revealed significant differences between each group of students (current, former and non-music students). In the area of self-concept of status, the results suggested two conclusions: current music students have higher self-concept of status than former or non-music students, and former music students had a higher concept than non-music students. School size had no effect on these results. Concerning students' self-concept of aspiration, former music students displayed significantly higher self-concept of aspiration than

non-music students, particularly high for students in small school settings. Students currently enrolled in music showed a greater degree of satisfaction in their music teacher and music classes. Students from a larger size school exhibited greater satisfaction in their classroom facilities. Overall, school size had no effect on student morale. The main reasons cited for joining a performing ensemble were interest in music, pride in the group and the enjoyment of performance. Reasons cited for dropping out were centered around conflicts with other interests, scheduling problems, time requirements and dislike of marching (band). The main reasons for not joining a music class were conflicts with other interests, time requirements, not seeing music as important to adulthood, social reasons and scheduling conflicts.

Based on these findings, the researcher suggests how music teachers can bridge the gap from students' daily life to the ensemble, and ways in which to create a more social and community oriented classroom. Koutz suggests that further research should examine a greater variety of school settings (urban, suburban, and rural), grade levels and examination of differences in race and gender.

Klinedinst (1991) sought to examine the factors contributing to musical success and retention in first year instrumental music students. He examined the following 11 factors in fifth-grade instrumental music students ($N$ = 205) from seven elementary schools in Cumberland Valley School District, Mechanicsburg, Pennsylvania:

1) Musical aptitude
2) Scholastic ability
3) Math achievement
4) Reading achievement
5) General music teacher rating
6) Attitude toward music
7) Self-concept in music
8) Music background
9) Motivation to achieve in music
10) Socioeconomic status

11) Instrument adaptation assessment

Twelve evaluative instruments were used to collect data, including: Intermediate Measures of Music Audiation, Otis-Lennon School Ability Test, Stanford Achievement Test, a general music and instrumental music teacher survey, Attitude Towards Music Scale, Svengalis' Self Concept in Music Scale and his Music Background Inventory. A rating scale was used to evaluate the students' physical characteristics in terms of playing specific instruments. At the end of the 32-week data collection, the results indicated that self-concept in music, scholastic ability, reading achievement, math achievement, and socioeconomic status proved to be significant predictors of student retention. Seventy-six percent of the participants were still playing, and 24% had discontinued. Klinedinst notes that student retention was more easily predicted than student dropout because student dropouts are often influenced by external reasons like peer pressure, scheduling conflicts, and student-teacher relationships. Musical performance achievement was most attributed to scholastic ability and the results indicated that music reading skills are related more to intelligence and academic achievement than to musical aptitude. These findings are in alignment with previous research (Hufstader, 1974; Mitchum, 1969; Young, 1971).

Klinedinst's suggestions for music educators are to use a positive approach specifically designed to bolster a positive self-concept in students in order to keep students enrolled in instrumental music study. The strong relationship found between "attitude towards music" and "self-concept in music" has implications that fostering this type of classroom report with students will increase the likelihood of musicians continuing instrumental music study.

Corenblum and Marshall (1998) investigated students' intentions to continue studying music by evaluating seven main constructs: Socioeconomic level, academic competency,

parental attitudes, students' attitudes, teacher attitudes, musical interests outside of class, and attributions/associations. In their research, Corenblum and Marshall sought to identify whether intellectual competencies predict retention directly or if the relation is mediated by other factors such as attitudes.

Band students were asked to answer questions about what they thought were the attitudes of other teachers and students towards the band program. Students were also asked to comment on their perception of the band teacher's attitude towards their own program. Prior research from the early 1980's indicated that attitudes and personality of the music teacher predict the intentions of the student to continue (Caimi, 1981; Nicholls, 1983).

Similar to the attitudes variable, musical interests outside of school were also believed to be tied directly to socioeconomic status. Students that come from a higher socioeconomic status and could afford to participate in other musical activities outside of the school day are likely to have a positive attitude towards music, higher musical aptitude and higher rates of retention.

The last variable examined consisted of the attributions that music students associated with successful and unsuccessful performances. Successful performances were associated with internal factors (ability or effort) and poor performances were associated with external factors (difficulty of the task or luck). It remains inconclusive as to whether or not there is a significant relationship between attributions and the ability to predict students' intentions of continuing.

Corenblum and Marshall made four hypotheses based on the above factors:

1) Socio economic level should predict students' outside musical interests and their perceptions of their parents' attitudes; both of these variables should, in turn, predict intentions.
2) Perceived school support of the band program should predict band teacher attitudes, and these attitudes should predict student attitudes, which, in turn should predict intentions.

3) Teacher evaluations and grades should directly predict student intentions to continue; that is, positive evaluations should be associated with intentions to remain in the program.
4) Teacher evaluations and grades should predict attributions for band grades. Favorable evaluations and grades should be positively associated with internal attributions and inversely associated with external ones.

The subjects ($N$ = 253) were ninth grade students enrolled in band programs in seven schools in the St. James-Assiniboia School Division in Winnipeg, Canada. The mean age was 14.6 years and 59% of the participants were girls. This particular grade level was selected because Timmerman's 1977 research found that the largest decrease in band enrollment occurs when students first entered high school.

Data was collected by observations during class and through band teacher and student questionnaire. Students indicated their attitudes and perceptions about band, current grade point averages (both in band and in other classes) and their intentions to continue in band next year. The questionnaire was administered during a regular class period. In addition to this questionnaire, band teachers evaluated each student's performance on a 5-point scale (1 = poor; 5 = excellent), ranked each student's in-class performance relative to each other, estimated the students' current grades and previous grades earned in the past two years.

Results of this study were consistent with almost all of the four hypotheses posed at the start of the research. Socioeconomic level, teacher evaluations, and perceived attitudes of peers and parents predicted students' intentions to continue. The only result of this research study that was not consistent with previous research and proposed hypotheses was that band report card grades were found not to be a good predictor of students' intentions to continue music study.

The researchers suggested that further studies should examine not just the perceived attitudes of others, but rather the actual views of parents, the school community and band

teachers. Corenblum and Marshall also recommended tracking band enrollments and scheduling conflicts at the high school.

## Student Attrition in String Programs

Morehouse's (1987) study had a purpose that was twofold: to design an instrument that would assess student and parent attitudes towards string instruction, and to identify attitudinal factors that explain retention and attrition in beginning string instruction. Morehouse surveyed beginning string students ($N = 1229$) in Texas by reaching out to their school orchestra teachers. It is important to note that grade level of beginning instrumental music study was not indicated in this study. The researcher gathered information by developing the String Student Attitude Measure (SSAM) in 1986. Content and construct validity for the SSAM was established and reliability of the instrument was determined to be $r = .90$, accounting for 81% of variance. Students were asked questions regarding their attitude toward strings class, playing in concerts, music played, string teacher, practicing, classmates, parent support, self improvement, satisfaction with instrument chosen and general negative string experiences.

Morehouse chose to use the Minnesota Teacher Attitude Inventory (MTAI) in order to collect data on teacher attitude toward students. Teacher attitudes influence student-teacher interpersonal relationships, and indirectly measure how well satisfied a teacher is teaching their particular subject. Reliability for the MTAI was $r = .93$. Teachers were asked questions regarding children's irresponsible tendencies and lack of self-discipline, autocratic control of student learning, tendency toward punitive punishment, and benevolent, paternalistic relationship to children.

Once data had been collected, the researcher divided the student responses into two groups: those that chose "strongly agree" or "agree" and those who selected "strongly disagree",

"disagree" or "not sure" in regards to taking strings next year. Morehouse concluded that the following variables, in order of strength, are significant predictors of student retention and dropout in beginning string instruction:

1) Attitude toward strings class
2) Attitude toward music played
3) Expected overall school grade
4) Attitude toward string teacher
5) Attitude toward string classmates
6) String teacher MTAI raw score
7) Attitude toward string instrument chosen
8) Attitude toward playing in concerts
9) Ownership of instrument
10) General overall negative string class experience
11) Perceived parent support
12) Sex of student
13) Private string lessons
14) Attitude toward practicing
15) Expected string class grade
16) Perception of improvement in playing

Similar to Morehouse, Mowery (1993) conducted a study aimed to determine the degree of influence that selected personality variables have on the dropout and retention rate in the public school string program. Additionally, Mowery sought to examine whether gender, race, family status or socioeconomic status influence the effect of personality variables on student attrition. The participants in Mowery's study were 144 Ohio public school sixth and eighth grade string players. Mowery studied sixth and eighth grade orchestra students who had dropped out of the orchestra program, and those students who continued in the program. Three instruments were used to collect data: The Myers-Briggs Type Indicator (MBTI) and the Basic Information Questionnaire (BIQ), and students who dropped out were also asked to voluntarily complete a Confidential Exit Questionnaire (CEQ). The MBTI identifies an individual's psychological type based on the inter-dynamics of the four indices. The BIQ was developed by Mowery to collect descriptive data on the participating subjects. The CEQ was only given to dropouts, who were

asked to indicate reasons for dropping out. A pilot study was conducted using 16 sixth and eighth grade band students and as a result some changes in wording were made for clarification purposes.

The results of this survey indicate that (1) there is a significant difference between persisters and dropouts concerning the personality variable of sensing-intuition; (2) there is a significant difference between sixth grade and eighth grade subjects on the judgment-perception personality variable; (3) the interaction between gender, race, grade, and persister/dropout status was significant for thinking-feeling scores; (4) there is a significant interaction between race and gender for thinking-feeling scores; (5) the best predictors of students dropping out of strings are directly related to how children perceive information. Further examination found that students with less-developed perceptive ability, regardless of whether the student prefers sensing or intuition, are more inclined to drop out of the string program. The majority of persisters in strings tend to perceive information intuitively, whereas most string dropouts tend to limit their perception of information to the senses. Students were asked to cite reasons why they discontinued their string study on the CEQ test and the top four reasons were: Class was boring, loss of interest in orchestra, scheduling problems, and dislike of teacher.

**Attrition in Instrumental Music When Moving Between Grade Levels**

Solly (1986) conducted a study in Cherry Hill, New Jersey that examined the reasons for attrition in instrumental music programs when students were moving between grade levels. Solly's research questions were:

1) What are the reasons students and their parents give for leaving the instrumental music program?
2) What are the reasons students give for remaining in the instrumental music program?

Solly surveyed three large groups of people: Students in fourth through eleventh grade who had chosen to discontinue participation in the instrumental music program, a random sample of students in fourth through eleventh grade who had chosen to continue in the instrumental music program, and the parents of students who had chosen to discontinue instrumental music study in school. Students from Cherry Hill's 12 elementary schools, two junior schools and one high school were represented. Of the 225 students who dropped out of the instrumental music program, 21% moved out of the school district and were not included in the study. The participants of the study were sent a permission form in September 1985 asking their parents for permission to survey their children. Six percent had parents who requested that their children not be surveyed. A month later, questionnaire to students who withdrew from the instrumental music program and students who were still enrolled were administered. At this same time, the questionnaire was mailed to the parents of the students who withdrew from the music programs and 15 days later a follow-up postcard was sent to the parents urging them to respond.

The students' responses to the questionnaire were both tabulated and summarized to determine the frequencies and percentages of responses to selected factors. Solly's major findings were that 55% of the students who withdrew from their respective music programs dropped out because they lost interest. Additionally, 73% of the withdrawal students were never contacted by teachers from a high school level to encourage them to continue in the program at the next grade level. Similarly, 70% of the comparison group (students currently enrolled in their instrumental music programs) were never contacted by a teacher from a higher school level to encourage them to continue either. While dropout occurred at varying grade levels and intervals, a particularly high number of withdrawals (12%) occurred after being in the program for six

years or more. Also, students and parents both cited that transportation to before-school rehearsals was a serious problem.

The findings of Solly's study confirmed the expectations that the highest attrition rates were marked by a change in schools- elementary to junior school and junior school to high school. The major three factors that students cited for dropping out were: loss of interest, scheduling, and dislike of practice. Additionally, the data indicated that the instrumental music teachers were not encouraging students to remain in the program at the ensuing school level. Distinctive qualities of this study among previously conducted research is the examination of the transition between *all* grade levels in which instrumental music was taught. Solly's study examined a large array of factors which influenced children's decision to withdraw from the program, whereas previous research explored a smaller number of factors. Additionally, the timing of this research was planned in a way that students were able to reflect on their choice to discontinue shortly after they had already made it. Reasons cited for quitting were believed to be more accurate and genuine as the students' decisions had recently been made.

## Summary of Literature Review

There is a large body of literature concerning attrition in the instrumental music education field, many of which have a large scope of study. Many studies have cited various reasons for high attrition rates in music programs. However, researchers can not agree on the exact causes. It appears that there is no single factor for students deciding to quit instrumental music instruction. The six studies discussed in detail in this chapter have laid the groundwork for this current study, however none satisfy all of the research questions that have been outlined for this study. Solly, Corenblum and Marshall, Morehouse, and Mowery's studies are similar because they all examine the reasons why students discontinue music study, and address the

purpose of this study: What are the factors that influence a child's decision to discontinue participation in school orchestra when transitioning from elementary to middle school? Koutz and Morehouse's studies address the perspective of former students which addresses the perceptions of the orchestra program at the middle school.

While these studies provide an excellent foundation to similarly linked research topics, the one aspect of these studies that is underrepresented is the examination of the novice instrumentalist transitioning into a higher grade level and new school. Solly's subjects were in fourth through eleventh grade, Corenblum and Marshall's subjects were in ninth grade, Koutz surveyed students in tenth and eleventh grade, Klinedinst's participants in fifth grade, Mowery's in sixth and eighth grade, and Morehouse's participants are labeled only as "beginners." Mowery's target audience is most similar to the one being examined in this study, as she is also working with sixth graders. This research study targets students transitioning from fifth to sixth grade, having completed three years of string study. The purpose of examining students with three years of string study is two fold: First, previous research has only examined attrition rates in beginning and more experienced instrumentalists. However, this particular population of students cannot be defined as beginning or experienced instrumentalists. Factors that contribute to orchestra students' attrition at this level might provide insight into what drives students to discontinue participation at this critical stage of instruction. Second, previous research has examined the factors of starting grade level of instrumental instruction on retention and attrition. Selecting a sample of students who all completed three years of string instruction in the same district would rule out this variable for examination.

It is hoped that by narrowing the scope of the study to young string students specifically, and examining reasons for discontinuing string study through a detailed questionnaire that string

teachers can better understand and predict student participation and election in public school orchestras.

# Chapter III

## Method and Procedures

The purpose of this study was to determine what factors contribute to orchestra students' attrition when transitioning from elementary to middle school. Several factors influencing attrition have emerged from prior research. The selected factors that were examined in the current study are:

1) Student perceptions about their elementary orchestra program
2) Student perceptions about the middle school orchestra program
3) Middle school scheduling
4) Parental support
5) Peer influence
6) Student perceptions about their own playing
7) Continued participation in school music outside of orchestra
8) Continued participation in music outside of school

This study was limited to studying sixth grade students who elected to discontinue orchestra participation when entering middle school in the fall of the 2012-2013 school year. These students matriculated from nine K-5 elementary schools and were identified as having completed three years of string study in their elementary school.

This chapter will be divided into four sections: 1) development of the questionnaire, 2) establishing validity of the questionnaire, 3) research participants and 4) procedures.

## Development of the Questionnaire

A 42-item questionnaire was developed to collect data regarding the factors described above. Six of the items were adapted from prior surveys (Brown, 1996). The remainder of the items were researcher-developed. Section one contained 24 items relating to parental support, motivation, students' perceptions about their own playing and their elementary school orchestra experience. Participants were asked to respond on a five-point Likert scale whether or not they agreed or disagreed with the items. Section two contained 12 questions regarding perceptions of

the new middle school program, teacher, and peer influence. In sections one and two, items were designed to include both positive and negative statements. According to Boyle and Radocy (1987), a balanced number of positive and negative statements should be included in a questionnaire in order to avoid response bias. Section three was comprised of six "yes" or "no" questions that related to musical experiences outside of orchestra class. If participants indicated that they engaged in other music making opportunities outside of school (singing at church, playing in a garage band, etc.) they were prompted with a text entry box to describe those experiences.

Qualtrics, an online data software program, was used as the method of delivery and data collection for this study so that the participants could take the survey at home via an email invitation with a link to the questionnaire. Using a web-based self-administered survey was a convenient way to deliver, follow-up and analyze the data. Delivering the questionnaire via an email invitation did not impact instructional time at school and gave the student an opportunity to take the survey in an environment that may have been more conducive to reflection, rather than taking it with a group of students during the school day. The complete questionnaire can be found in Appendix A.

## Research Participants

### Description of the School District

The nearly 9,000 public school students in the school district being examined came from mixed socioeconomic backgrounds. There were eleven elementary schools, three middle schools and one high school. Students in elementary school could choose to enroll in orchestra in third grade, and band and chorus in fourth grade. Students who signed up for instrumental music were pulled out of classroom instruction for one half hour lesson a week and also had a 45-minute

before school rehearsal once a week. All elementary students received one hour of art instruction and general music a week. Unlike instrumental music, art and general music classes were planned into their weekly class schedule.

In middle school, students could choose to take electives such as art, music (orchestra, band, chorus, piano, guitar), consumer science (sowing and cooking), or technology education (woodshop). All of these electives were half-year classes except for band and orchestra, which were both full year courses. Therefore, students enrolled in band or orchestra were not able to take as many electives as their peers. It is important to note that the scheduling and structure of the school day were different at all three middle schools. It was a district-wide requirement that all middle school students participate in at least one credit of music every year. Students who discontinued participation in orchestra, band, or chorus could elect to take general music, piano, or guitar to fill their music credit. In high school, more music course options like electronic music and music theory were offered.

In the same year in which this study took place, the band program had a 25% attrition rate, and the chorus had a 34% attrition rate. The attrition rate between fifth grade and sixth grade orchestra was 46%. This attrition rate was 19% above the average national orchestra student attrition rate of 27% between elementary and middle school (Hamann & Gillespie, 2002).

**Description of the Participants**

The participants came from eleven elementary schools and all had three years of public school string study. As third, fourth and fifth graders, students received a 30-minute pull-out lesson and a 45-minute before school rehearsal, both once a week. Band instruction was offered in fourth and fifth grade in elementary school. Some elementary schools allowed students to

participate in both band and orchestra; however, others did not allow students to study both as these pull-out lessons interfered with the child's instructional time in the classroom. All elementary schools in this study allowed students to participate in chorus in addition to their instrumental performing group. Some elementary schools required all fifth graders to participate in the school chorus.

The sample was selected using a list of the fifth grade string students at the end of the 2011-2012 school year. This list was originally distributed as a template for teachers to record their end-of-year district-wide exit assessments all fifth grade string players must take regardless of their participation in middle school orchestra. From this list, the eight elementary orchestra teachers were asked to confirm the names, gender and instruments of their students. It was determined that at the end of the 2011-2012 school year 206 students were identified as being enrolled in their elementary school's fifth grade orchestra. Next, a list of students enrolled in the three middle school orchestras for the 2012-2013 school year was obtained from the middle school orchestra teachers. The names of students enrolled in middle school orchestra were then cross-examined with the list of identified fifth grade string players. Students who had moved out of district, enrolled in private school and had not completed three years of instrumental music study were removed from the sample. Of the original 206 students, 19 students quit before the end of their fifth grade year, and 33 students were identified as not having taken three years of string study in the district being examined and 16 students either moved out of town or enrolled in private school after the end of their fifth grade year. Of the 138 students who had met the required three years of elementary music instruction, 95 students were enrolled in middle school orchestra. It was determined that 43 students had dropped out of the orchestra program and were eligible for this study.

## Procedures and Permissions

### Validity and Pilot Test

The questionnaire was given to three experts in the field of string education who all had prior experience teaching sixth grade orchestra. Items were examined for their readability for the intended audience and for verification that the items accurately represented the seven constructs outlined by the researcher. Of particular focus was the wording of the language so that students taking the questionnaire would not get confused and that there was no ambiguity in the items.

The pilot questionnaire was administered to a group of three middle school string students in August 2012 in order to ensure that the web link functioned properly and to determine the amount of time required to complete the questionnaire. The questionnaire was revised in August 2012 based on the feedback received from the validity panel and the pilot study participants.

### Main Study

Permission to conduct the survey was obtained from the district-wide music and art coordinator, the three middle school principals, the deputy superintendent, and the University of Michigan Institutional Review Board (IRB).

Data for the main study was collected from October-December of 2012 after permission had been granted by the school administration, parents, and changes from the pilot test had been made. October was determined to be the most accurate time to account for student drop-out as there is almost always some attrition that occurs at the start of the school year as a result of scheduling conflicts or mis-communicated class selection. Parents of the identified students ($N$ = 43) were emailed a consent letter explaining the nature of the survey and their response to the email indicated their consent for their child to participate. As part of an incentive to compete the

survey, participants were sent a coupon for a free ice cream cone that was donated from a local ice cream shop. Once the response was received, the researcher replied with a personalized invitation to a link to the survey. The parent was then instructed to open the questionnaire for their child to complete on a web-enabled device. Using Qualtrics, the researcher could observe whether or not the participant completed the survey. Participants who did not complete the survey after one week were sent a reminder email encouraging them to complete the survey. The total number of respondents for this survey was 20 and data was collected over the span of eight weeks. Follow-up emails ceased once the researcher achieved a response rate of 47%. Of those participants who took the survey in one sitting, 15 respondents required 5-14 minutes to complete the survey. Five respondents started the survey and completed it at a later time.

Once responses were recorded, the researcher sent the data to school officials who then provided categorical variable information regarding gender, instrument, elementary and middle school attended, race, socioeconomic status and academic achievement. School officials de-identified the data set so that student responses, and sensitive information regarding socioeconomic status and academic achievement were kept anonymous. Participants' socioeconomic status was determined by their inclusion on the free and reduced lunch lists. Participants' academic achievement was determined by their percentile rank on the State Mastery Tests (SMT). The SMT was the standard assessment administered to students in third through eighth grade. Students were assessed in reading, writing and mathematics. Reports of individual student achievement relative to performance standards in each of these content areas were provided to the school districts and parents/guardians of each student tested. The SMT had scaled scores from 100 to 400 that were used to determine performance categories such as advanced, mastery, proficient, etc. However, because there was no percentile rank provided for

the SMT scores, a local percentile rank for each student was calculated based on the scaled scores of the 670 fifth grade students in the district who took the test in the spring of 2012.

**Description of the Respondents**

Sixteen of the respondents were female (80%), four were male (20%), 14 played violin (70%), four played the cello (20%) and two played viola (10%). Three of the 20 (15%) participants were identified as receiving "free or reduced lunch" (low socio economic status). Seventeen of the respondents had identified themselves as white (85%), two as Asian (10%), and one as Hispanic (5%). Students from all three of the district's middle schools and 9 out of 11 elementary schools responded to the questionnaire.

**Data Analysis Procedures**

Data was exported from Qualtircs and analyzed using Statistical Package for the Social Sciences (SPSS). The factors contributing to attrition were analyzed by examining participants' responses to the questionnaire items. Each of the Likert-type items were analyzed to determine the percentage of agreement. In addition, the 24 items from section one were summed to form the Elementary Orchestra Experience Scale (EOES). The higher a participant's score on the EOES, the higher the quality of their elementary orchestra experience. Reliability of the EOES using Cronbach's alpha was .84. The 12 items from section two were summed to form the Middle School Orchestra Perceptions Scale (MSOPS). Reliability of the MSOPS using Cronbach's alpha was .74. Scores from the EOES and MSOPS were examined based on the categorical variables including gender, instrument, elementary and middle schools attended, socioeconomic status and academic achievement. The EOES and MSOPS scores were also examined based on participants' responses to the six "yes" or "no" questions from section three.

# Chapter IV

## Review of Data

### Pilot Study

The pilot study was conducted in August 2012. Three middle school students, ages 11, and two twelve year olds who were currently enrolled in the public school orchestra program took the questionnaire and provided feedback to the researcher. The participants provided feedback and suggestions regarding clarity of the item wording, and tested the viability of the email link for accessing the questionnaire. The average time it took participants to complete the questionnaire was 6 minutes, 30 seconds. Based on the pilot study, the email distribution of the link was refined because almost all of the pilot study participants had difficulty opening the link to the questionnaire. All of the students reported that questionnaire items were worded clearly and were easy to understand. Two participants suggested clarification regarding two survey items, and also suggested that a question regarding sports conflicts be included in the questionnaire. One pilot study participant noted that sports commitments become more serious at the middle school level. Changes in the questionnaire were made based on the feedback from all three participants.

### Main Study

#### State Mastery Test (SMT) data.

The SMT had scaled scores from 100 to 400 that were used to determine performance categories such as advanced, mastery, proficient, etc. For the purposes of this study, school officials calculated a local percentile rank for each student based on the other students in the town who took the same test in the spring of 2012. Students were tested in three subjects: Math ($M$ = 54.65, $SD$ = 27.20), writing ($M$ = 58.60, $SD$= 25.19), reading ($M$ = 57.85, $SD$ = 26.93). The

overall mean percentile rank for these students was 58.90% with a standard deviation of 27.83. Very strong relationships were found between participants' scores on the three sections of the SMT. Those who did well in math, also did well in writing ($r = .76$, n = 20, $p < .001$), reading ($r = .71$, n = 20, $p < .001$) and overall ($r = .92$, n = 20, $p < .001$). Kruskal-Wallis tests did not reveal any significant differences between participants' overall SMT scores based on their gender, instrument, race, elementary or middle school attended, or socio-economic status.

**Student perceptions about the elementary orchestra program.**

The first 24 items of the survey related to the participants' perception of their elementary orchestra experience. Responses to these items are presented in Table 1. An overwhelming percentage of participants (80%) surveyed agreed that their elementary orchestra sounded good at concerts, and 75% reported that they liked their elementary orchestra teacher. However, half of the participants (50%) reported liking the music that was performed and studied in their school orchestra, and 50% of the participants disagreed to some extent with the statement "elementary orchestra was not fun".

**Student perceptions about the middle school orchestra program.**

Items 25- 36 of the survey related to the participants' perception of the middle school orchestra program. Responses to these items are presented in Table 2. The majority of participants surveyed (70%) agreed to some extent that the middle school orchestra sounded good. Despite the fact that nearly all participants (95%) reported having never met the middle school orchestra teacher and having an opportunity to ask questions, half of the participants (50%) agreed to some extent that the middle school teacher is "nice", while just under half (45%) of the participants had no opinion about the teacher. Forty-five percent of respondents

Table 1

Elementary Orchestra Experience Scale Items (EOES) *(N* = 20)

| Survey Item | SD (1) | D (2) | NAorD (3) | A (4) | SA (5) |
|---|---|---|---|---|---|
| 1. My elementary orchestra sounded good at concerts. | 0% | 5% | 15% | 65% | 15% |
| 2. I learned new songs quickly. | 10 | 15 | 30 | 35 | 10 |
| 3. Orchestra in elementary school was not fun. (reversed) | 15 | 35 | 30 | 20 | 0 |
| 4. My parents thought it was important for me to be in orchestra. | 0 | 5 | 50 | 20 | 25 |
| 5. I was not good at playing my orchestra instrument. (reversed) | 20 | 35 | 15 | 30 | 0 |
| 6. I liked to practice at home. | 35 | 25 | 10 | 25 | 5 |
| 7. I liked my elementary school orchestra teacher. | 5 | 10 | 10 | 35 | 40 |
| 8. My orchestra instrument was hard to play. (reversed) | 10 | 45 | 20 | 20 | 5 |
| 9. I was proud of my work in elementary orchestra. | 0 | 20 | 25 | 35 | 20 |
| 10. It was difficult for my parents to arrange rides to concerts and/or before school rehearsals. (reversed) | 30 | 40 | 25 | 5 | 0 |
| 11. I felt my performance on my instrument contributed positively to the ensemble. | 0 | 10 | 45 | 40 | 5 |
| 12. I didn't have enough time to practice my orchestra instrument at home. (reversed) | 10 | 45 | 5 | 30 | 10 |
| 13. My friends were in orchestra in elementary school. | 0 | 10 | 20 | 45 | 25 |
| 14. My parents thought orchestra was too much work for me. (reversed) | 35 | 50 | 15 | 0 | 0 |
| 15. I sat in the back of the orchestra. (reversed) | 20 | 30 | 20 | 5 | 25 |
| 16. My parents were proud of my work in elementary orchestra. | 0 | 0 | 20 | 30 | 50 |
| 17. I wasn't allowed to practice at home. (reversed) | 75 | 25 | 0 | 0 | 0 |
| 18. I liked the music we played in my elementary orchestra. | 0 | 30 | 20 | 40 | 10 |

Table 1, cont.

| Survey Item | SD (1) | D (2) | NAorD (3) | A (4) | SA (5) |
|---|---|---|---|---|---|
| 19. I didn't like the instrument I played in orchestra. (reversed) | 20 | 50 | 20 | 10 | 0 |
| 20. Elementary school orchestra was too easy for me. (reversed) | 20 | 35 | 25 | 15 | 5 |
| 21. I practiced a lot at home. | 40 | 25 | 20 | 15 | 0 |
| 22. I felt very nervous performing. (reversed) | 20 | 35 | 25 | 20 | 0 |
| 23. My parents tried to convince me to stay in orchestra. | 5 | 20 | 30 | 25 | 20 |
| 24. I am happy with my decision to quit orchestra in middle school. (reversed) | 10 | 25 | 10 | 30 | 25 |

agreed to some extent that the middle school orchestra would be a lot of work. Just under half of the participants (45%) indicated that their parents encouraged them to continue with orchestra in middle school. When participants were asked if being in the orchestra in middle school was perceived as "NOT cool", 50% of them disagreed to some extent with that statement.

**Middle school scheduling.**

An overwhelming percentage of participants (75%) reported not signing up for orchestra because they wanted to explore other electives at the middle school instead. A slim 30% of respondents reported that they could not fit orchestra into their schedule at the middle school, but 45% of the participants indicated that they had sports conflicts that interfered with their music participation.

Table 2

Middle School Orchestra Perceptions Scale (MSOPS) ($N$ = 20)

| Survey Item | SD (1) | D (2) | NAorD (3) | A (4) | SA (5) |
|---|---|---|---|---|---|
| 25. I've heard that the middle school orchestra is good. | 5% | 0% | 25% | 65% | 5% |
| 26. I didn't take orchestra in middle school because I wanted to take other electives instead. (reversed) | 5 | 0 | 20 | 60 | 15 |
| 27. Most of my friends from my elementary school chose to continue with orchestra at the middle school. | 10 | 15 | 45 | 30 | 0 |
| 28. I think that orchestra in the middle school would be a lot of work. (reversed) | 0 | 10 | 45 | 30 | 15 |
| 29. I did not think middle school orchestra would be fun. (reversed) | 0 | 35 | 35 | 25 | 5 |
| 30. I've heard the middle school orchestra teacher makes class fun. | 5 | 10 | 70 | 15 | 0 |
| 31. I didn't think I was good enough to play with the middle school orchestra. (reversed) | 10 | 35 | 20 | 20 | 15 |
| 32. I couldn't fit orchestra into my schedule at the middle school. (reversed) | 10 | 15 | 45 | 25 | 5 |
| 33. I've heard the middle school orchestra teacher is nice. | 0 | 5 | 45 | 40 | 10 |
| 34. Being in the orchestra in middle school is NOT cool. (reversed) | 15 | 35 | 45 | 5 | 0 |
| 35. Some of my friends encouraged me to quit orchestra in middle school. (reversed) | 35 | 35 | 20 | 10 | 0 |
| 36. I did not have time to participate in orchestra because I had too many sports practices and games. (reversed) | 5 | 40 | 10 | 35 | 10 |

**Parental support.**

Forty-five percent of the participants surveyed indicated that they thought their parents felt it was important to be in (elementary) orchestra. Most of the participants (80%) agreed to some extent with the statement "My parents were proud of my work in elementary orchestra";

however, they also reported later in the survey that only 45% of parents tried to convince them to continue with orchestra in middle school. Seventy percent of students said it was not difficult for their parents to arrange rides to get to rehearsals and concerts, and an overwhelming number of participants (85%) agreed that their parents did not think elementary orchestra was "too much work". All of the participants (100%) indicated that their parents allowed them to practice their instrument at home, however participants generally did not like to practice (60%) or have time to practice (55%) outside of school.

**Peer influence.**

A large number of participants (70%) reported that their friends were also in elementary orchestra with them. A smaller percentage of participants (30%) were in some form of agreement that their friends chose to continue their orchestra experience in middle school. When asked if some of their friends had encouraged them to discontinue orchestra participation, a large majority (70%) of participants said that was not the case. Additionally, when asked if orchestra was viewed as "NOT cool" in middle school, half of the participants (50%) disagreed to some extent.

**Student perceptions about their playing.**

A little more than half of the participants surveyed (55%) reported that they were proud of their work in elementary orchestra. 55% of the participants agreed to some extent that their instrument was not hard to play and the same percentage of participants (55%) disagreed to some extent that they were not good on their orchestra instrument. More than half of the participants (55%) disagreed to some extent that elementary school orchestra was too easy for them and just less than half of the population (45%) felt that their playing in elementary school contributed positively to the ensemble. Forty-five percent reported learning new songs quickly, while a little

more than one-third of participants (35%) thought that they were not good enough to play with the middle school orchestra.

**Continued participation in school music outside of orchestra.**

The majority of participants (80%) surveyed indicated that when they discontinued orchestra participation, they joined either their school chorus or band. Half of the participants (50%) reported joining the chorus and a smaller percentage (30%) joining the band. Responses to this item can be found in Table 3.

**Continued participation in music outside of school.**

All of the participants surveyed (100%) indicated that they did not take private lessons on their orchestra instrument outside of school and do not engage in other orchestral ensembles outside of school. It appears that students who have discontinued their orchestra instrument participation in school have completely discontinued their orchestral instrumental music study. However, 55% of participants responded that they did engage in other music making opportunities outside of school that did not involve their orchestra instrument. Participants who responded "yes" to the last question on the survey, "I no longer play my orchestra instrument but participate in other types of music making outside of school" were prompted to explain the types of music making that they engage in outside of school. Six of the nine text responses indicated participation in vocal music (singing in church, musicals, and honor choir organizations). Three students indicated they were taking piano lessons and one student indicated he was playing guitar and was playing in a rock band.

**Elementary Orchestra Experience Scale (EOES) and other variables.**

The 24-item Elementary Orchestra Experience Scale (EOES) ($M = 83.95$, $SD = 11.54$) measured a child's elementary orchestra experience by reversing negatively worded questions

Table 3

Yes/No Survey Items. ($N = 20$)

| Survey Item | Yes | No |
|---|---|---|
| 37. I had an opportunity to meet the middle school orchestra teacher and ask questions. | 5% | 95% |
| 38. I was a member of the Festival Orchestra when I was in elementary school. | 20 | 80 |
| 39. I currently take private lessons outside of school on the instrument I played in orchestra. | 0 | 100 |
| 40. I continue to play my orchestra instrument outside of school in a youth orchestra or other program. | 0 | 100 |
| 41. I no longer play my orchestra instrument but I am in a chorus, or band at school. | 80* | 20 |
| 42. I no longer play my orchestra instrument but participate in other types of music making outside of school | 55 | 45 |

*50% reported joining chorus, 30% reported joining band

and summing the responses (Strongly Disagree=1, Disagree=2, Neither Agree or Disagree= 3, Agree= 4, Strongly Agree= 5). The range of possible scores for the EOES was from 24-120. The EOES had good internal consistency, with a Cronbach's alpha coefficient of .84. A high score on the EOES indicated a positive experience in elementary orchestra. The high EOES mean scores indicated that participants had a favorable experience in their elementary orchestra.

Participants' EOES scores were examined based on gender, race, instrument played in orchestra, schools attended and socioeconomic status. Kruskal-Wallis tests revealed no significant differences in participants' EOES scores based on these variables. The correlation between students' academic achievement as measured by overall SMT score and EOES score was weak and not significant ($r = .18$).

**Middle School Orchestra Perceptions Scale (MSOPS) and other variables.**

Similar to the EOES, participants' overall perception of the middle school orchestra

program was computed by reversing negatively worded questions and summing participants' responses to the 12 items. This score was called the Middle School Orchestra Perceptions Scale (MSOPS) ($M$ = 37.35, $SD$ = 5.75). The range of possible scores for the MSOPS was 12-60. The MSOPS also demonstrated good internal consistency, with a Cronbach's alpha coefficient of .74. A high score on the MSOPS indicated a positive perception of the middle school orchestra program. The MSOPS mean score for the participants indicated that in general, participants had a somewhat favorable perception of the middle school orchestra program.

No significant differences were found between participants' MSOPS scores based on gender, race, instrument played in orchestra, elementary schools attended or socioeconomic status. However, a Kruskal-Wallis test revealed that participants from middle school "X" had a significantly higher MSOPS score than students at the other two middle schools ($p$ = .07). The correlation between students' academic achievement as measured by overall SMT score and MSOPS score was very weak and not significant ($r$ = .01). A strong and significant relationship was found between EOES and MSOPS scores ($r$ = .64, $N$ = 20, $p$ = .002). Participants who reported having a positive experience in their elementary orchestra also reported having a favorable perception of the middle school program. The inverse of this is also true, participants who did not report having a positive experience in elementary orchestra also indicated having a negative perception of the middle school program.

# Chapter V

# Discussion

## Summary

The purpose of this study was to determine what factors contribute to orchestra students' attrition when transitioning from elementary to middle school. Additionally, this study aimed to inform string teachers of students' concerns from the perspective of the student and is intended to provide constructive feedback to better the public school orchestral programs. The selected factors that were examined in the current study were:

1) Student perceptions about their elementary orchestra program
2) Student perceptions about the middle school orchestra program
3) Middle school scheduling
4) Parental support
5) Peer influence
6) Student perceptions about their own playing
7) Continued participation in school music outside of orchestra
8) Continued participation in music outside of school

This study was limited to surveying sixth grade students who had elected to discontinue orchestra participation when entering middle school in the fall of the 2012-2013 school year. These students matriculated from nine K-5 elementary schools and have been identified as having completed three years of string study in their elementary school. The school district being examined contained eleven elementary schools, three middle schools and one high school, and was located in a New England town 30 minutes outside of a large metropolis.

The sample was selected using a list of the fifth grade string students at the end of the 2011-2012 school year. From this list, the elementary orchestra teachers were asked to confirm the names, gender and instruments of their students. Next, a list of students enrolled in the three middle school orchestras for the 2012-2013 school year was obtained from the middle school orchestra teachers. The names of students enrolled in middle school orchestra were then cross-

examined with the list of identified fifth grade string players. Students who had moved out of the district, enrolled in private school and had not completed three years of instrumental music study were removed from the sample. It was determined that 43 students had dropped out of the orchestra program and were eligible for this study.

Parents of the identified students ($N = 43$) were emailed a consent letter explaining the nature of the survey and their response to the email indicated their consent for their child to participate. Once the response was received, the researcher replied with a personalized invitation to a link to the survey. The parent was then instructed to cue up the questionnaire for their child to complete on a web-enabled device. Participants completed a 42-item survey that was comprised of three sections. The 24 items from section one and the 12 items from section two were summed separately to form the Elementary Orchestra Experience Scale (EOES) and the Middle School Orchestra Perceptions Scale (MSOPS) respectively. The higher a participant's score on the EOES, the more favorable the quality of their elementary orchestra experience. Similarly, a high MSOPS score indicated a favorable perception that the participant held of the middle school orchestra program. Scores from the EOES and MSOPS were examined based on categorical variables including gender, instrument, elementary and middle schools attended, race, socioeconomic status and academic achievement that was provided from school officials. Data collection took two months to complete and a total of 20 responses were recorded and examined.

**Conclusions**

Consistent with prior research, the findings from this study support the idea that there is no one single factor that causes a child to discontinue instrumental music study (Brown, 1996; Corenblum & Marshall, 1998; Hamann & Gillespie, 2009; Hartley, 1996; Kinney, 2009; Klinedinst, 1991; Martignetti, 1965; Morehouse, 1987; Perkins, 1998; Solly, 1986). One of the

findings from this study was that students discontinued participation in orchestra because they wanted to take other electives at the middle school. Koutz (1987) also found that students cited conflicts with other interests (and scheduling) as reasons why they dropped out. Elementary students from the school district in the current study did not have an opportunity to take elective courses, with the exception of instrumental or choral music study. However, when these students transitioned to middle school, students were presented with many courses for which they could elect to take (family and consumer science, technology education, art, chorus, band, or orchestra). Seventy-five percent of the participants surveyed reported that they did not take orchestra in middle school because they wanted to take other electives instead.

Once these participants had made the decision to quit orchestra, 80% of the participants reported joining a different performing ensemble at their school. Fifty percent of the participants reported joining the school chorus, and 30% reported joining the school band. This data suggests that despite the 75% of participants who wanted to sign up for other electives in middle school, 80% chose to schedule music instruction through a different performing ensemble. Given these results, it is unclear if the remaining 20% of the respondents elected to take general music or guitar.

Of the 80% who joined band or chorus, it is likely that some of the participants performed not only with their elementary orchestra but also with their elementary chorus. All elementary schools in this study allowed students to participate in both an instrumental and vocal performing groups. Some elementary schools required all fifth graders to participate in the school chorus. However, some elementary schools did not allow students to study both orchestra and band as these pull-out lessons interfered with the child's instructional time in the classroom. It is likely that the 30% of students who switched over to band had previous instruction on the

instrument and were not learning a band instrument for the first time.

Based on this data, music educators are encouraged to find a way to make orchestra seem more appealing and exciting so that the distraction of other course offerings will not cause students to drop out of the orchestra program. Perhaps advertising and campaigning orchestra at the middle school as having something different to offer than students' elementary school experience will attract and retain students who are looking for something new (i.e. trips, competitions, alternative music styles, etc.).

**Parent support.**

Many researchers would agree that parental involvement is critical to the success of young musicians (Brown, 1996; Moyer, 2010; Perkins, 1998; Solly, 1986). The data from this study suggests that while participants felt that their parents were proud of their work, they did not perceive that their parents thought participation in orchestra was important. The messages being sent from parents are mixed. Eighty percent of participants agreed to some extent that their parents were proud of their work in elementary school orchestra. However, less than half of the participants (45%) agreed to some extent that their parents thought it was important for them to be in orchestra. For this same survey item, 50% of the participants neither agreed nor disagreed which might suggest that parents never discussed with their child whether it was important for them to be in orchestra. Additionally, only 45% of participants agreed to some extent with the statement "my parents tried to convince me to stay in orchestra" and a quarter of the participants (25%) disagreed to some extent with this statement. Based on this data, it seems that parents are supportive of their child's work in orchestra, but may not think orchestra participation is important or necessary in middle school. According to previous research, parents who hold an overall more positive attitude towards music were more likely to have children who continued in

music study (Brown, 1996; Corenblum & Marshall, 1998; Moyer, 2010). Results of this study are in alignment with prior research on the importance of parental support on retaining students in music programs. If music teachers can build parental support in the school community for the orchestra program, and inform parents about their child's music study, perhaps more parents will have a conversation with their children about continuing with orchestra. Stronger parental support for the orchestra program could lower attrition rates.

**Peer influence.**

Previous research has shown that the support and influence of peers also plays a role in attrition (Brown, 1996; Corenblum & Marshall, 1998; Hallam, 1998). Data from this study supports previous research regarding peer influence and suggests that participants did not have a strong peer support to continue with orchestra. Seventy percent of participants agreed to some extent that their friends were in elementary orchestra. However, only 30% of the participants agreed to some extent that their friends from elementary school chose to continue with orchestra in middle school. This suggests that students are discontinuing orchestra participation concurrently with their friends. It should be noted that in section two of the survey, 70% of the participants reported that their friends did not encourage them to quit orchestra. However, it is possible that the action of a particular student's decision to quit orchestra negatively influenced another student's decision. Lowering attrition rates will eliminate a "domino effect" of dropouts among orchestra students. Further research on peer influence is recommended in order to better understand how students who stay in orchestra compare to those who quit orchestra. An interesting follow up study would investigate if students who continued with orchestra had friends who continued as well, or if students elected to continue their string study without their peer group. Studying peer influence in relation to students enrolled in band compared with

students enrolled in chorus or orchestra would also shed light on the issue of peer persuasion.

**Student perceptions of home practice and school orchestra repertoire.**

Data from this study indicates that the majority (60%) of participants did not like practicing their instrument at home. While all (100%) of the students reported being allowed to practice at home, 65% of the students admitted that they did not practice a lot at home. Moreover, 60% of the students disagreed with the statement "I liked to practice at home." While the results of this study are consistent with Solly's 1986 study, they are in contrast with Morehouse's findings (1987). Solly cited "dislike of practice" as one of the top three factors that caused students to dropout of their orchestra program. However, Morehouse's findings ranked "attitude toward practicing" as 14th out of 16 predictors of student retention and dropout (ranked in order of most significant). At the top of Morehouse's list of predictors was "Attitude toward strings class as a class" and "Attitude toward music played". His findings indicated that these two items were first and second (respectively) as most likely to predict retention rates. In this particular study, despite students' mean score on the ESOS being generally high ($M$ = 83.95, $SD$ = 11.54), only half of the participants (50%) reported liking the music they played in elementary orchestra. If students do not like the music they are studying, one can infer that students would be less inclined to practice their music at home during their free time. It is important to note that the extent to which dislike of home practice and/or dislike of school orchestra repertoire contributes to a participants' decision to discontinue string study remains unclear. Further research should examine attrition rates between ensembles whose members (students) had input on selecting repertoire compared to ensembles whose repertoire was chosen for them by the teacher. Additionally, examining whether or not there is an increase in at home practice time between these two ensembles might determine whether or not students practice more depending

on the chosen repertoire.

**Student perceptions about the middle school orchestra teacher.**

In section three of the survey, 95% of the participants reported having never met the middle school orchestra teacher. Interestingly, in section two of the survey, half of the participants (50%) agreed to some extent that the middle school orchestra teacher is "nice". In response to the same item, 45% of the participants neither agreed nor disagreed; after all, it is difficult to form an opinion on someone if you have not met them. The data suggests that despite nearly all (95%) of the students having never met the middle school orchestra teacher, half of the participants perceived the teacher as being nice. It is possible that a participant's older sibling had the teacher in middle school, or that the participant has worked before with the teacher in a different role. The findings here are similar to that of Solly's 1986 study which found that 73% of the students who withdrew from the orchestra program were never contacted by the teacher at the next grade level to encourage them to continue. The data from this study suggests that if the middle school orchestra teacher went to the elementary school to meet the fifth grade orchestra students, it is possible that more elementary students would think the teacher is "nice". Inviting students to the middle school to sit in on rehearsals with the older students might build excitement and allow the students to ask questions or concerns regarding the orchestra program. Providing these types of experiences for the younger students might create a higher perception of the teacher and the middle school orchestra program itself, which in turn, could lower attrition rates.

**Student perceptions about their playing.**

One finding from Hallam's 1998 study revealed that students who experience failure are likely to become unmotivated and lose interest. Various items posed to the participants regarding

self-concept revealed that students had a mixed perception of their musician selves. Just over half of the students surveyed (55%) disagreed to some extent with the statement "I was not good at playing my orchestra instrument". And based on responses from other items regarding self perception of one's own playing, 55% of participants disagreed to some extent that they were not "good" at their instrument, 50% disagreed to some extent that they sat at the back of the orchestra, and less than half (45%) agreed to some extent that they learned new songs quickly. Survey item 38 asked participants if they were a member of the Festival Orchestra. The Festival Orchestra was a select orchestra for which students' elementary orchestra teachers could recommend the best performing students from their program to participate. Of the participants surveyed, only 20% of students reported having participated in this elite orchestra. Forty-five percent of the students disagreed to some extent that they weren't good enough to play with the middle school orchestra. Even though this may not be a primary factor in contributing towards student attrition, it does appear that perception of one's musical abilities played a role in discontinuing orchestra participation for some students. Results of self-concept remain inconclusive and more research is needed.

**Academic achievement.**

Klinedinst (1991) stated that among other factors, student retention was predicted by scholastic ability, reading and math achievement. The data from this study does not support those findings as correlations revealed very weak relationships between SMT scores and EOES and MSOPS scores.

**Continued participation in music.**

It might be expected that students who discontinue orchestra participation between elementary and middle school would report having a favorable elementary school orchestra

experience (high score on the ESOS), but would have a negative perception of the middle school orchestra program (low score on the MSOPS). The data from this study did not support this expectation. In general, participants had a somewhat high EOES and MSOPS score and more importantly, a strong relationship was found between participant EOES and MSOPS scores. Those participants who had a high EOES score also scored favorably on the MSOPS, and inversely, participants who had a low EOES also had a low MSOPS score.

Participants from middle school "X" had a significantly higher MSOPS score than students at the other two middle schools. Only three of the 20 participants (15%) attended middle school "W". All three of the participants had several responses that were the same: They all joined their school band, they all agreed the middle school orchestra teacher is nice (even though they all reported never meeting her), all agreed that they discontinued orchestra participation because they wanted to take other electives instead, and all agreed that the middle school orchestra sounds good. All three participants studied a band instrument at their elementary school in addition to learning a string instrument. Its possible that the participants had a high perception of the music programs in general at middle school "W" but chose to continue with their band instrument. It's also possible that their high perception of the quality of the middle school orchestra and teacher could be based on an older sibling's experience with the middle school orchestra.

The participants in this study who discontinued orchestra participation in middle school all had given up their formal string instruction. Had the data revealed that participants were seeking outside orchestra programs or private lessons to keep up their string study, then one might infer that participants had a less than favorable perception of the middle school program. This was not the case. However, 80% of participants surveyed reported joining the school chorus

or band (50% chorus, 30% band). Additionally, just over half (55%) reported engaging in other types of music outside of school such as piano and guitar lessons, singing in a church or district-wide choir, and musical theatre.

**Limitations of Current Study**

While collecting data via an online survey proved to be easy to collect and analyze the responses, there were certain limitations that presented themselves. The researcher had no way of verifying whether or not the child was completing the survey or if someone else was taking it for them. Accessing this population also proved to be difficult as many of the participants and their families knew the researcher. Some of the participants surveyed had the researcher as their former elementary orchestra teacher. While participants were told that their responses would be kept anonymous, perhaps working with participants in a neighboring district with similar variables would have elicited more honest responses.

Data collection and analysis was made easy by using the online survey software. However, some participants required the link to be sent to various email addresses because the link to the survey was not being received to certain email providers. During the data collection time frame, there was a presidential election and a major natural disaster that had affected the area and had shut down schools for over a week. In addition to other factors, this caused responses to be slower and required the researcher to follow up repeatedly with families who had initially agreed to participate.

Some meaningful connections were not able to be made given the small number of participants ($N = 20$). Having a greater representation from students from all eleven elementary schools could also have helped make a more meaningful comparison between the schools. Four of the nine schools represented only had one student participate in the study. The opinions of that

one student might not be representative of the sample. It should be noted that although the number of participants was small, the number of responses was mostly representative of the larger population of families eligible for participation in the study.

**Recommendations for Further Research**

Future research should continue to examine specific reasons why students discontinue their orchestra participation. Researchers should consider surveying the parents of students who have discontinued their orchestra participation in conjunction with the student perspective. Perhaps the perspective of a parent would shed light as to why children are or are not signing up for orchestra at the middle school level. In this study, students reported their parents having mixed support for the orchestra program both at the elementary school and at the middle school. More research should be done to determine if students in band and chorus perceive their parents to have similar mixed support. If this lack of parental support is the case for all of the performing ensembles, then a district-wide effort needs to be made in order to build support for music education in the school community. Further examination as to why students perceive support from home to be mixed is needed.

Researchers might also consider having participants write in their own words specifically why they dropped out of their orchestra programs instead of selecting from researcher generated items. This text entry option would be especially interesting in response to why students chose to join the school band or chorus instead of the orchestra. Also, a section on the questionnaire for the student to explain what, if anything, could have been done to change their mind might be helpful for teachers.

Refinement in the data-collecting instrument is suggested for future use. Item number 41 asked “I no longer play my orchestra instrument but I am in a chorus, or band at school”.

Respondents could select: “Yes, chorus”, “Yes, band” or “Neither chorus nor band”. If a student selected “neither chorus nor band”, it would be helpful for the researcher to add a text entry box for the respondent to enter what course they chose to take so that other course elections can be identified and tabulated. Additionally, removing the “neither agree or disagree” option might elicit different results among the respondents. Allowing respondents only to agree (and strongly agree) or disagree (and strongly disagree) might shape the results of this study differently.

**Implications for Music Educators**

Based on the results of this study, music educators are encouraged to implement ways of reaching out and getting to know students at the younger grade levels. Inviting fifth graders to the middle school to sit in on rehearsals with the older students or hosting a “side-by-side” orchestra concert with the elementary and middle school students could be beneficial to both the younger students and their parents. Students would have the opportunity to work with the middle school teacher during rehearsals, ask questions about the program, and allow the student to make a more informed decision about orchestra at the middle school and the teacher. Hosting this type of concert would also allow parents an opportunity to hear the middle school orchestra perform, and meet the teacher. This experience could promote a conversation about continuing string instruction at the middle school between the parent and their child. Building excitement and support in this way fosters a stronger parent support for the orchestra program in the community, which could lower attrition rates.

# APPENDIX A

## Sixth Grade Attrition Questionnaire

**6th Grade Attrition Questionnaire**

Thank you for participating in this study! Your responses will be kept anonymous. This questionnaire should take approximately 5 minutes to complete. This questionnaire is to be completed by the STUDENT only.

**Section One: Elementary Orchestra Experience**

Please read each sentence regarding your elementary orchestra experience on the left and select one box to show whether you strongly disagree, disagree, neither agree nor disagree, agree or strongly agree with the statement.

| Survey Item | Strongly Disagree (1) | Disagree (2) | Neither Agree or Disagree (3) | Agree (4) | Strongly Agree (5) |
|---|---|---|---|---|---|
| 1. My elementary orchestra sounded good at concerts. | 1 | 2 | 3 | 4 | 5 |
| 2. I learned new songs quickly. | 1 | 2 | 3 | 4 | 5 |
| 3. Orchestra in elementary school was not fun. | 1 | 2 | 3 | 4 | 5 |
| 4. My parents thought it was important for me to be in orchestra. | 1 | 2 | 3 | 4 | 5 |
| 5. I was not good at playing my orchestra instrument. | 1 | 2 | 3 | 4 | 5 |
| 6. I liked to practice at home. | 1 | 2 | 3 | 4 | 5 |
| 7. I liked my elementary school orchestra teacher. | 1 | 2 | 3 | 4 | 5 |
| 8. My orchestra instrument was hard to play. | 1 | 2 | 3 | 4 | 5 |
| 9. I was proud of my work in elementary orchestra. | 1 | 2 | 3 | 4 | 5 |
| 10. It was difficult for my parents to arrange rides to concerts and/or before school rehearsals. | 1 | 2 | 3 | 4 | 5 |
| 11. I felt my performance on my instrument contributed positively to the ensemble. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| 12. I didn't have enough time to practice my orchestra instrument at home. | 1 | 2 | 3 | 4 | 5 |
| 13. My friends were in orchestra in elementary school. | 1 | 2 | 3 | 4 | 5 |
| 14. My parents thought orchestra was too much work for me. | 1 | 2 | 3 | 4 | 5 |
| 15. I sat in the back of the orchestra. | 1 | 2 | 3 | 4 | 5 |
| 16. My parents were proud of my work in elementary orchestra. | 1 | 2 | 3 | 4 | 5 |
| 17. I wasn't allowed to practice at home. | 1 | 2 | 3 | 4 | 5 |
| 18. I liked the music we played in my elementary orchestra. | 1 | 2 | 3 | 4 | 5 |
| 19. I didn't like the instrument I played in orchestra. | 1 | 2 | 3 | 4 | 5 |
| 20. Elementary school orchestra was too easy for me. | 1 | 2 | 3 | 4 | 5 |
| 21. I practiced a lot at home. | 1 | 2 | 3 | 4 | 5 |
| 22. I felt very nervous performing. | 1 | 2 | 3 | 4 | 5 |
| 23. My parents tried to convince me to stay in orchestra. | 1 | 2 | 3 | 4 | 5 |
| 24. I am happy with my decision to quit orchestra in middle school. | 1 | 2 | 3 | 4 | 5 |

**Section Two: Perceptions of the Middle School Orchestra**

Please read each sentence regarding your perceptions of the middle school orchestra on the left and select one box to show whether you strongly disagree, disagree, neither agree nor disagree, agree or strongly agree with the statement.

| Survey Item | Strongly Disagree (1) | Disagree (2) | Neither Agree or Disagree (3) | Agree (4) | Strongly Agree (5) |
|---|---|---|---|---|---|
| 25. I've heard that the middle school orchestra is good. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|---|---|---|---|---|---|
| 26. I didn't take orchestra in middle school because I wanted to take other electives instead. | 1 | 2 | 3 | 4 | 5 |
| 27. Most of my friends from my elementary school chose to continue with orchestra at the middle school. | 1 | 2 | 3 | 4 | 5 |
| 28. I think that orchestra in the middle school would be a lot of work. | 1 | 2 | 3 | 4 | 5 |
| 29. I did not think middle school orchestra would be fun. | 1 | 2 | 3 | 4 | 5 |
| 30. I've heard the middle school orchestra teacher makes class fun. | 1 | 2 | 3 | 4 | 5 |
| 31. I didn’t think I was good enough to play with the middle school orchestra. | 1 | 2 | 3 | 4 | 5 |
| 32. I couldn't fit orchestra into my schedule at the middle school. | 1 | 2 | 3 | 4 | 5 |
| 33. I've heard the middle school orchestra teacher is nice. | 1 | 2 | 3 | 4 | 5 |
| 34. Being in the orchestra in middle school is NOT cool. | 1 | 2 | 3 | 4 | 5 |
| 35. Some of my friends encouraged me to quit orchestra in middle school. | 1 | 2 | 3 | 4 | 5 |
| 36. I did not have time to participate in orchestra because I had too many sports practices and games. | 1 | 2 | 3 | 4 | 5 |

I had an opportunity to meet the middle school orchestra teacher and ask questions.

- ❍ Yes
- ❍ No

I was a member of the Festival Orchestra when I was in elementary school.

- ❍ Yes
- ❍ No

I currently take private lessons outside of school on the instrument I played in orchestra.

- ❍ Yes
- ❍ No

I continue to play my orchestra instrument outside of school in a youth orchestra or other program.

- ❍ Yes
- ❍ No

I no longer play my orchestra instrument but I am in a chorus, or band at school.

- ❍ Yes, Chorus
- ❍ Yes, Band
- ❍ Neither chorus nor band

I no longer play my orchestra instrument but participate in other types of music making outside of school. (For example: Singing at church, playing in a rock band, etc.)

- ❍ Yes
- ❍ No

Answer If I no longer play my orchestra instrument but participate ... Yes Is Selected

Describe the other types of music making opportunities you have outside of school:

Survey complete. Thank you for participating in this study.

# APPENDIX B

## Consent letter to parents of children who have discontinued orchestra

Dear Parent,

My name is Bethany Cook and I am the _____ Orchestra Director. I am writing to seek your permission to allow your child's participation in a research study I am conducting in partial fulfillment for completion of my Master's Degree in Music Education at the University of Michigan.

The purpose of my current study is to examine the factors that contribute towards students discontinuing orchestra participation when they go to middle school and whether or not they engage in other music making opportunities. Last year, your child was enrolled in his/her elementary school orchestra and is no longer participating in orchestra at their middle school.

Upon your consent, you will be emailed a link to a web-based questionnaire that I have developed that asks students to answer 42 items. This is a multiple choice & five- point scale questionnaire that should take your child no more than five minutes to complete. The questionnaire can be completed at home on a web-enabled device. *As a thank you, ____ Ice Cream has offered to give students who complete the questionnaire a coupon for a free ice cream cone!* This will be mailed to your home once the online questionnaire has been completed.

There are no risks from participation in this study. All responses are voluntary and will be kept anonymous. The results of this survey will not be reported with your child's name and their responses. The University of Michigan Institutional Review Board for research has reviewed and approved this study. Dr. _____, supervisor for music and art for the town of _____ and Dr. _____, Deputy Superintendent, have also approved this research study. If you wish, you may call Dr. _____ to verify the validity of this study: [phone number].

Having taught at all three school levels, I know first hand how crucial this grade level transition is to the growth of your child's education. I would be most grateful for your child's participation in this study.

**If you are willing to grant permission for your child to participate, please respond to this email indicating your consent and you will be sent an email containing a link to the online questionnaire for your child to complete.**

Sincerely,

Bethany Cook
[school email address]

# APPENDIX C

## IRB Approval/Exemption Letter


Health Sciences and Behavioral Sciences Institutional Review Board • 540 East Liberty Street, Suite 202, Ann Arbor, MI 48104-2210 • phone (734) 936-0933 • fax (734) 998-9171 • irbhsbs@umich.edu

**Subject:** Notice of Exemption for [HUM00066181]

**SUBMISSION INFORMATION:** Title: An Examination of Factors Contributing to Attrition in Orchestra Programs Between Elementary and Middle School Full Study Title (if applicable): Study eResearch ID: HUM00066181 Date of this Notification from IRB: 7/18/2012 Date of IRB Exempt Determination: 7/18/2012 UM Federalwide Assurance: FWA00004969 expiring on 6/13/2014 OHRP IRB Registration Number(s): IRB00000246

**IRB EXEMPTION STATUS:** The IRB HSBS has reviewed the study referenced above and determined that, as currently described, it is exempt from ongoing IRB review, per the following federal exemption category:

**EXEMPTION #1 of the 45 CFR 46.101.(b):** Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

Note that the study is considered exempt as long as any changes to the use of human subjects (including their data) remain within the scope of the exemption category above. Any proposed changes that may exceed the scope of this category, or the approval conditions of any other non-IRB reviewing committees, must be submitted as an amendment through eResearch.

Although an exemption determination eliminates the need for ongoing IRB review and approval, you still have an obligation to understand and abide by generally accepted principles of responsible and ethical conduct of research. Examples of these principles can be found in the Belmont Report as well as in guidance from professional societies and scientific organizations.

**SUBMITTING AMENDMENTS VIA eRESEARCH:** You can access the online forms for amendments in the eResearch workspace for this exempt study, referenced above.

**ACCESSING EXEMPT STUDIES IN eRESEARCH:** Click the "Exempt and Not Regulated" tab in your eResearch home workspace to access this exempt study.

Richard W Redman

**Richard Redman**
Chair, IRB HSBS

**Bibliography**

Allen, B. E. (1981). Student dropout in orchestra programs in three school systems in the state of Arkansas. *Dissertation Abstracts International, 42*, 3405A. (UMI No. 8201181)

Anthony, J. (1975). Student perceptions of factors related to discontinuance from Iowa public high school band programs in districts of 10,000 or more students (Doctoral dissertation). *Dissertation Abstracts International*, 35, 7939A.

Boyle, J. D. & Radocy, R. E. (1987). *Measurement and evaluation of musical experiences*. New York: Schirmer Books.

Brown, M. J. (1996). Student attitude toward instrumental music education during the first year of instruction. *Dissertation Abstracts International: Section A. Humanities and Social Sciences, 57*(5), 1987A. (UMI No. 9630864)

Caimi, F. J. (1981). Relationships between motivation variables and selected criterion measures of high school band directing success. *Journal of Research in Music Education, 29*, 183-198.

Colwell, R. J., & Goolsby, T. (1992). *The teaching of instrumental music*. New Jersey: Prentice-Hall, Inc.

Corenblum, B., & Marshall, E. (1998). The band played on: Predicting students' intentions to continue studying music. *Journal of Research in Music Education, 46*(1), 128-140.

Cutietta, R. A., & McAllister, P. A. (1997). Student personality and instrumental participation, continuation and choice. *Journal of Research in Music Education, 42*(2), 282-294. doi:10.2307/3345587

Dunnahoo, J. B. (1975). A comparison of the effects of the two options of the quarter-system schedule upon student enrollment in music organizations in two Texas high schools (Doctoral dissertation). *Dissertation Abstracts International, 36*, 5904A.

Frakes, L. (1984). Differences in music achievement, academic achievement and attitude among participants, dropouts, and nonparticipants in secondary school music. Dissertation Abstracts International, 46/02A. (UMI No. 8507938)

Hallam, S. (1998). The predictors of achievement and dropout in instrumental tuition. *Psychology of Music, 26*(2), 116-132. doi:10.1177/0305735698262002

Hamann, D. L., & Gillespie, R. (1998, Spring). The status of the orchestra programs in the public schools. *Journal of Research in Music Education, 46*(1), 75-86.

Hamann, D. L., & Gillespie, R. (2002). Status of orchestra programs in public schools. *Journal of String Research, 2*, 9-35. Retrieved from http://web.cfa.arizona.edu/sites/jsr/index.php/requirements/

Hamann, D. L., & Gillespie, R. (2009). *Strategies for teaching strings: Building a successful string and orchestra program.* New York: Oxford University Press.

Hartley, L. A. (1996, Winter). Influence of starting grade and school organization on enrollment and retention in beginning instrumental music. *Journal of Research in Music Education, 44*(4), 304-318.

Hufstader, R. A. (1985). Predicting success in beginning instrumental music through use of selected tests. *Journal of Research in Music Education, 22*, 52-57.

Kessels, U. (2005). Fitting into the stereotype: How gender-stereotyped perceptions of prototypic peers relate to liking for school subjects. *European Journal of Psychology of Education, 20*(3), 309-323.

Kinney, D. W. (2009). Selected nonmusic predictors of urban students' decisions to enroll and persist in middle school band programs. *Journal of Research in Music Education*. Advance online publication. doi:10.1177/0022429409350086

Klinedinst, R.E. (1991, Fall). Predicting performance achievement and retention of fifth grade instrumental students. *Journal of Research in Music Education, 39*(3), 225-238.

Koutz, T. A. (1987). An anyalysis of attitudinal differences toward music performance classes in secondary schools by non-participants, current, and former participants. University of Missouri-Columbia.

Kuhlman, K. (2005). Musical aptitude vs. academic ability as a predictor of beginning instrumental music achievement and retention: Research implications. *Update: Applications of Research in Music Education 24*(1), 34-43. doi:10.1177/87551233050240010105

Kruth, E. (1964). Student drop-out in instrumental music in the secondary schools of Oakland, California. (Doctoral dissertation, Stanford University, 1964). *Dissertation Abstracts, 25*, 5633-4.

Lax, M. E. (1966). A study to determine the factors that influence the dropouts from the instrumental music program in moving from one school level to another in selected Detroit Public Schools. *Dissertation Abstracts International: Section A. Humanities and Social Sciences, 27*(8), 2285A. (UMI No. 6700667)

McCarthy, J. F. (1980, Spring). Individualized instruction, student achievement and dropout in an urban elementary instrumental music program. *Journal of Research in Music Education, 28*(1), 59-69. Retrieved from http://www.jstor.org/stable/3345053

Martignetti, A. J. (1965, Autumn). Causes of elementary instrumental music dropouts. *Journal of Research in Music Education, 13*(3), 177-183. doi:10.2307/3343672

Mawbey, W. E. (1973). Wastage from instrumental classes in schools. *Psychology of Music, 1*(1), 33-43. doi:10.1177/030577567311007

Mitchum, J. P. (1969). The Wing "Standardized Tests of Musical Intelligence": An investigation of predictability with selected seventh-grade beginning band students. *Dissertation Abstracts International, 30*(11), 5017A. (University Microfilms No. 70-8565)

Mixon, K. (2007). *Reading and teaching all instrumental music students* . Lanham, MD: Rowman & Littlefield Education.

Morehouse, T. L. (1987). The relationship of selected attitudinal factors to dropout and retention in beginning string students. *Dissertation Abstracts International: Section A. Humanities and Social Sciences, 49*(4), 757A. (UMI No. 8811016)

Mowery, W. F. (1993). *An investigation of the relationship between selected personality variables and retention of students in the string orchestra program* (Doctoral dissertation, Ohio State University). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 9412026)

Moyer, J. R. (2010). Dad has a horn in the attic: Relationships between instrument source, parental involvement, socio economic status and attrition among beginning band students. *Dissertation Abstracts International 71*/05A. (UMI No. 3405993)

Nicholls, J. G. (1983). Task involvement in music. In *Documentary report of the Ann Arbor Symposium on the Application of Psychology to the Teaching and Learning of Music: Session III. Motivation and creativity.* Reston, VA: Music Educators National Conference.

Perkins, D. L. (1998). Factors relating to student participation in public school string programs. *Dissertation Abstracts International, 59*, 4388A

Solly, B. J. (1986). A study of attrition from the instrumental music program in moving between grade levels in Cherry Hill, New Jersey. *Dissertation Abstracts International: Section A. Humanities and Social Sciences, 47*(8), 2877A. (UMI No. 8627515)

Witt, A.C., & Goodrich, K. (2003). Retention and retainment in string classes: Review of the research literature. In G.V. Barnes (Ed.), *Applying research to teaching and playing stringed instruments* (pp. 85-98). Fairfax, VA: American String Teachers Association with National School Orchestra Association.

Wolfle, E. E. (1969). Relationships between selected factors and participation and non-participation in instrumental music in the Cincinnati public schools. *Dissertation Abstracts International, 30*, 2565-2566A.

Wragg, D. (1974). An investigation into some factors affecting the carry-over of music interest and involvement during the transition period between primary and secondary education. *Psychology of Muisc, 2*, 13-23. doi: 10.1177/030573567421002

Young, W. T. (1971). The role of musical aptitude, intelligence, and academic achievement in predicting the musical attainment of elementary instrumental music students. *Journal of Research in Music Education, 14*, 385-398.