# High School Band Students’ Attitudes Toward Teacher Turnover 

 byThomas E. Kloss

# A Dissertation Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy 

Approved April 2011 by the Graduate Supervisory Committee:<br>Jill Sullivan, Chair Jeffrey Bush<br>Margaret Schmidt<br>Sandra Stauffer<br>Evan Tobias

ARIZONA STATE UNIVERSITY

May 2011


#### Abstract

The purposes of this study were (a) to develop a reliable and valid measure of secondary student attitudes toward band teacher turnover using the Thurstone (1928) equal-appearing interval scale as a model, and (b) to administer this measurement tool to determine attitudes of high school band students toward teacher turnover. This procedure included collecting statements about an imagined teacher turnover from students in the population $(N=216)$ and having student judges $(N=95)$ sort the statements into eleven categories based on how positive, neutral, or negative, each statement was perceived. The judging results were then analyzed, and 29 statements were selected for inclusion in the final survey, which was completed by students $(N=521)$ from 10 randomly selected high schools in Arizona. Student responses were analyzed and compared by the independent variables of gender, grade level, and band teacher turnover experience, to determine if significant differences existed.

Results indicated that the overall students' attitudes toward teacher turnover are neutral. One significant difference was found in the slightly positive attitudes of students in the year immediately following a band teacher turnover. This only lasts a year, as students in the second year of a teacher turnover were found to have comparable attitudes to students who have not experienced a new teacher transition. Findings also suggest seniors may have a different perspective than other students toward teacher turnover.


## Dedication

This work is dedicated to my father, Thomas M. Kloss, Jr. (1950 - 2008), whose spirit lives on.

## ACKNOWLEDGMENTS

My wife, Tania, has been wonderful for her support and encouragement throughout my time in this doctoral program. Somehow I will make up for all of the missed dinners.

I wish to thank members of my committee who have collectively guided, challenged, encouraged, and supported me in my graduate school experience. It takes a village to grow a doctoral student. I would like to thank to my chair, Dr. Jill Sullivan, and all of her work and feedback throughout this study. All of the members of my committee, Dr. Jill Sullivan, Dr. Sandra Stauffer, Dr. Margaret Schmidt, Dr. Jeffrey Bush, and Dr. Evan Tobias, have provided an amazing graduate experience.

This study could not have been completed without the help of the several wonderful Arizona band teachers and their students. Their participation in either part or the whole of this study has provided the results listed in the following pages.

I would like to thank Julie Schlafer for her work formatting this document.
Finally, I would like to thank my family, friends, and colleagues who have been there for me through this process, and beyond. I treasure all of the people who have guided and shaped me into the person I am today.

## TABLE OF CONTENTS

Page
LIST OF TABLES ..... viii
LIST OF FIGURES ..... ix
CHAPTER ONE: INTRODUCTION ..... 1
Purpose of the Study ..... 3
Need for the Study ..... 4
Delimitations of the Study. ..... 5
CHAPTER TWO: REVIEW OF RELATED LITERATURE ..... 7
Teacher Turnover in General Education ..... 7
Interpretations of national teacher turnover data. ..... 8
Reasons why teachers leave their positions ..... 10
Costs of teacher turnover to schools and school districts. ..... 11
Possible effects of teacher turnover on student achievement. ..... 13
Music Teacher Turnover ..... 17
Music teacher job stress and burnout ..... 19
Possible benefits of teacher turnover ..... 22
Students' attitudes toward band teachers ..... 23
Attitude Research ..... 25
Defining attitudes ..... 25
Measuring attitudes ..... 31
CHAPTER THREE: METHOD AND PROCEDURES ..... 36
Page
Thurstone's Equal-Appearing Intervals Method of Measuring
Attitudes ..... 36
Use of the Thurstone equal-appearing intervals method ..... 45
Part 1: Thurstone Method of Equal-appearing Intervals: Present
Study ..... 47
Sampling procedure. ..... 47
Phase One procedure ..... 51
Phase Two procedure ..... 54
Phase Three procedure ..... 58
Part 2: Likert-type and Open-ended Questions ..... 59
CHAPTER FOUR: RESULTS ..... 61
Part 1: What Are High School Band Students’ Attitudes Towards
Teacher Turnover? ..... 62
Inferential Statistics for Research Questions 2 - 5 ..... 66
Part 2: Analysis of Likert-type and Open-ended Questions. ..... 84
CHAPTER 5: DISCUSSION ..... 95
The Thurstone Method of Equal-Appearing Intervals ..... 95
Results of the Attitude Survey ..... 98
Implications and Future Research ..... 101
REFERENCES ..... 105

## APPENDIX

A PHASE ONE STATEMENT COLLECTION SURVEY ..... 112
B PHASE ONE STATEMENTS WITH FREQUENCY AND TOPIC CLASSIFICATION ..... 115
C SPREADSHEET FORMULAS AND CALCULATIONS OF JUDGING
RESULTS STATEMENTS 1 - 3 ..... 139
D RESULTS OF PHASE TWO STATEMENT SORTING. ..... 143
E FINAL PHASE THREE SURVEY WITH SCALE VALUES SHOWN ..... 152
F OPEN-ENDED QUESTION RESPONSES ..... 155
G IRB ACCEPTANCE ..... 161

## LIST OF TABLES

Table ..... Page
1 School and Student Participation ..... 51
2 Means and Standard Deviations of Attitude Score by Independent Variable ..... 67
3 ANOVA Summary Table for Analysis of Attitude Scores by Gender,
Grade Level, and Turnover Experience ..... 69
4 Thurstone Statement, Scale Value, and Percentage of Overall Agreement ..... 72
5 Statements and Percentages of Participants Marking "Agree" ..... 76
6 Scale Values and Percentages Agreement of Statements With High
Variability Within the Grade Level Variable ..... 82
7 Mean Score for Likert-type Questions 1 - 10 ..... 85
8 ANOVA Summary Table for Analysis of Liker-type Questions by Gender, Grade Level, and Turnover Experience ..... 87
9 Likert-type Statement Mean Score by Independent Variable ..... 87
10 Correlations Between Likert-type Responses ..... 91

## LIST OF FIGURES

Figure Page

1. Schematic conception of attitudes. Rosenberg \& Hovland, 1960. ..... 27
2. Sample data spreadsheet adapted from Edwards (1957, p. 87) ..... 42
3. Formula for a scale value. Adapted from Edwards (1957, p. 87). ..... 43
4. Formulas for Q value. Adapted from Edwards (1957, p. 88) ..... 44
5. Summary of Phase One. ..... 51
6. Summary of Phase Two. ..... 54
7. Summary of Phase Three. ..... 58
8. Frequency of overall attitude scores ..... 63
9. Frequency of attitude score by gender. ..... 64
10. Frequency of attitude score by grade level ..... 65
11. Frequency of attitude score by turnover experience. ..... 66

## Chapter One: Introduction

At the end of every school year, teachers may choose between staying in their current positions, transferring to another school within the same school district, transferring to a school outside of the school district, or leaving the profession (AFEE, 2005; Boe, Cook, \& Sunderland, 2008; Guarino, Santibañez, \& Daley, 2006; Ingersoll 2001; Keigher, 2010; Lankford, Loeb, \& Wyckoff, 2002; Luekins, Lyter, \& Fox, 2004; Murnane \& Steele, 2007; NCES, 2005, NCTAF, 2003; Terry \& Kritsonis, 2008). A majority of teachers, approximately 84\%, stay in their current positions each year (Ingersoll, 2001; Luekins, Lyter, \& Fox, 2004; Keigher, 2010; NCES 2005; NCTAF, 2003). For the teacher, staying may be desirable for salary, seniority, or because of some other personal benefits present at that school (AFEE, 2008). Teachers who leave may also be seeking better salary, working conditions, or other benefits not present in their current situations (Gordon, 2000; Guin, 2004; Keigher, 2010; Lankford, Loeb, \& Wyckoff, 2002; Luekins, Lyter, \& Fox, 2004; Madsen \& Hancock, 2002; NCES, 2005; NCTAF, 2003). Teachers who leave are often leaving the profession entirely, finding career options outside of the field of education (AFEE, 2008; Boe, Cook, \& Sunderland, 2008; Ingersoll, 2001; Keigher, 2010; Luekins, Lyter, \& Fox, 2004; Madsen \& Hancock, 2002; NCES, 2005, NCTAF, 2003). Retiring teachers also create open positions each year that need to be filled (Boe, Cook, \& Sunderland, 2008; Ingersoll, 2001; Luekins, Lyter, \& Fox, 2004; Keigher, 2010). The National Center for Education Statistics (NCES) collects data periodically as part of the Schools and Staffing Survey (SASS) and Teacher

Follow-up Survey (TFS). The most current TFS data from the 2008-2009 survey (Keigher, 2010) showed that over the past 20 years the percentage of public school teachers who left their positions increased from $13.5 \%$ to $15.5 \%$. Teachers who moved from one position to another stayed constant at just under $8 \%$, while teachers who left increased from $5.6 \%$ to $8 \%$.

Music teachers are not immune to the turnover phenomenon (Hancock, 2008, 2009; Kloss, 2009, 2010; Madsen \& Hancock, 2002; Nimmo, 1987). Increased demands on secondary music teachers could be a factor toward levels of job stress and burnout (Bechen, 2000; Gordon, 2000; Scheib, 2003, 2004, 2006). Music teachers may also leave temporarily for reasons that may include raising children or advancing their education (Hancock, 2009; Madsen \& Hancock, 2002).

A major difference between most other subject area teachers and music teachers, however, is that music teachers may see students for multiple years (Kloss, 2010). A student may have the same high school band teacher, for example, during all four years of their high school careers. Kloss found that having the same teacher for all four years presents idiosyncratic relationships between secondary band students and their teacher. If that teacher decides to leave at the end of the school year, students may experience a wide variety of emotions, opinions, and attitudes. Students then presumably have a choice of continuing in the music program with a new teacher or leaving. This relationship between students and their band teacher may potentially have an impact on
program enrollment. Therefore, a better understanding of secondary band students' attitudes toward teacher turnover is needed.

## Purpose of the Study

The purposes of this study were (a) to develop a reliable and valid measure of high school student attitudes toward band teacher turnover using the Thurstone (1928) equal-appearing interval scale as a model, and (b) to administer this measurement tool to determine attitudes of high school band students toward teacher turnover.

Constructing measures of attitude have appeared in music education literature (Chalmers, 1978; Nolin, 1973; Larsen, 2010; Rainey, 2002; Shaw \& Tomcala, 1976; Zorn, 1973). Many of these studies focus on attitudes toward a style of music, attitudes toward chamber music, or preferences in appreciation. An instrument to measure students' attitudes toward teacher turnover does not exist. Methods of constructing attitude scales were researched, and the Thurstone (1928) method of equal-appearing intervals was selected for use in the present study.

The Thurstone (1928) method of equal-appearing intervals was selected for several reasons. This method utilizes an authentic construction process of creating a measurement instrument with the use of members from the population being studied. In the present study, statements of opinion toward teacher turnover were collected from students, sorted and judged by students for inclusion into a final survey instrument, which was then completed by students. The rigorous construction process attempts to increase reliability and validity. The method
results in an attitude score that represents interval data, which can be analyzed using parametric statistics.

Other attitude construction methods, such as Likert Scaling (1932), were considered but eliminated with critiques in construction methods or data analysis. Other methods may have been useful if a previous measure of attitudes toward teacher turnover had existed.

## Need for the Study

Researchers who study teacher turnover tend to focus on the teachers. Students who experience a change in teachers are usually studied in the framework of the effect of teacher turnover on achievement. Music students' attitudes toward teacher turnover have not been studied. Specifically, the high school band student, who presumably would have the same teacher for multiple years, is the focus of this study. Prior research (Kloss, 2010) indicates a wide range of opinions, emotions, and behaviors exist among high school band students when a teacher change occurs. Some students experience feelings of abandonment or anger toward their departing teacher. Other students are not affected by the change of teacher, choosing to continue to participate in band for the intrinsic qualities of making music. Students may also use the teacher turnover as an excuse to quit their participation in band (Kloss, 2009, 2010). This descriptive study will help ascertain what levels of positive or negative attitudes exist among high school band students towards teacher turnover. Findings may: (1) help a teacher prepare to leave a position, (2) help an incoming teacher
understand and prepare for these existing attitudes (3) reduce the amount of stress and anxiety on students as part of the transition process.

## Delimitations of the Study

This study was conducted with high school band students within the state of Arizona. A stratified random sample of high schools was used to locate and invite participants. High schools were chosen based on Arizona Interscholastic Association (AIA) school size divisions (1A - 5A). Selected high schools represented schools with no turnover, schools in their first year of a teacher turnover, and schools in their second year after a teacher turnover. The following types of high schools were eliminated: Schools with more than one band director, schools with fewer than four grade levels, and schools that did not participate in Arizona Band and Orchestra Directors Association (ABODA) or Arizona Music Educator Association (AMEA) sponsored activities. Students invited to participate represented both genders and all four secondary grade levels (freshman, sophomore, junior, senior). All participation was voluntary, so directors and students had the choice of whether or not to participate.

The following research questions guided this study:

1. What are high school band students' attitudes towards teacher turnover?
2. Do significant differences exist in attitudes between students who have not experienced a teacher turnover, are in their first year of a teacher turnover, or are in their second year after a teacher turnover?
3. Do significant differences exist in attitudes toward teacher turnover by grade level?
4. Do significant differences exist in attitudes toward teacher turnover by gender?
5. Do significant differences exist in attitudes toward teacher turnover by interactions between gender, grade level, or turnover experience?

## Chapter Two: Review of Related Literature

The purposes of this study were (a) to develop a reliable and valid measure of secondary student attitudes toward band teacher turnover using the Thurstone (1928) equal-appearing interval scale as a model, and (b) to administer this measurement tool to determine attitudes of high school band students toward teacher turnover. In this chapter, I present research related to teacher turnover and to defining and measuring attitudes. Topics include research into teacher turnover, including costs to school districts and student achievement, as well as research specific to music teacher turnover, stress and burnout of music teachers, and the teacher as a factor of band student retention and attrition. Literature related to how to define and measure attitudes is also discussed.

## Teacher Turnover in General Education

Teacher turnover is generally defined as teachers who either move from one school to another, or leave the profession at the end of an academic school year (AFEE, 2005). Teacher turnover in the $\mathrm{K}-12$ school system is widely researched. A large group of studies focuses on the areas of: interpretations of national teacher turnover data (Boe, Cook, \& Sunderland 2008; Ingersoll, 2001; Keigher, 2010; NCES, 2005; NCTAF, 2003); reasons why teachers leave their positions (Falch \& Ronning, 2005; Ingersoll, 2001); teacher retention (AFEE, 2008; Ingersoll, 2001; Villar \& Strong 2007); and ways of increasing the supply of qualified teachers (Murnane \& Steele, 2007; Darling-Hammond \& Sykes, 2003). Researchers also have examined the financial costs of teacher turnover to schools and school districts (AFEE, 2005; NCTAF 2007; Villar \& Strong 2007),
possible effects of teacher turnover on student achievement (Guin 2004; Haycock, 1998; Sanders \& Rivers 1996; Terry \& Kritsonis 2008), and some possible benefits to teacher turnover (Guin, 2004; Hancock, 2009).

Interpretations of national teacher turnover data. The National Center for Education Statistics (NCES) collects data periodically as part of the Schools and Staffing Survey (SASS) and Teacher Follow-up Survey (TFS). Boe, Cook, and Sunderland (2008) describe the TFS as:

A high quality survey that defines attrition and migration behaviorally by tracking changes in an individual teacher's employment status from one year to the next, as distinguished from simply asking teachers about their intentions to remain or leave in the future. Furthermore, the sample sizes are reasonably large and the response rates are quite high. (p. 8)

The most current TFS data from the 2008-2009 survey (Keigher, 2010) showed that over the past 20 years, starting with the first TFS survey in 1988-1989, the percentage of public school teachers who left their positions increased from $13.5 \%$ to $15.5 \%$. Of these teachers, those who moved from one position to another stayed constant at just under $8 \%$, while teachers who left the profession increased from $5.6 \%$ to $8 \%$. During this time period, though, the actual numbers of teachers leaving the profession ranged from 130,500 in 1991-1992, to 269,800 in 2008-2009. In 2008-2009 a combined 500,000 teachers moved to different schools or left the teaching profession.

Interpretations of national data on teacher turnover vary greatly between researchers. Boe et al. (2008) looked at recently published reports and literature
reviews of teacher turnover, and suggest that published rates of annual teacher turnover have been miscalculated. They argue that some published research used preliminary information from the Teacher Follow-up Survey (TFS) instead of the actual published TFS results. Using the actual TFS data, they estimate that the attrition rate after three years is $25.5 \%$ instead of the $33 \%$ reported by the National Commission on Teaching and America's Future (NCTAF, 2003), and that $38.5 \%$ of teachers leave after five years instead of the $46 \%$ also reported by the NCTAF. Boe et al. argue that $8.5 \%$ of teachers leave the profession in each of their first three years, and $6.5 \%$ of teachers in their fourth and fifth year.

Boe et al. (2008) argue that inconsistent definitions of teacher turnover will change the turnover percentages from one study to the next. Comparing Ingersoll's (2002) assertion that $12 \%$ of attrition can be attributed to retirement, and Lukens et al. (2004) assertion that retirement accounts for $30 \%$ of attrition is an example of the problems of turnover data analysis. Ingersoll (2002) reported that approximately $11 \%$ of teachers quit after their first year of teaching, $29 \%$ after three years, and $39 \%$ after their fifth year of teaching. Looking at the same data, the NCTAF authors (2003) reported that $14 \%$ of all teachers leave the profession after their first year, $33 \%$ percent of all teachers leave the profession by their third year, and almost half (46\%) by their fifth year of teaching. Boe et al. suggested that the NCTAF added part time teachers into their analysis which resulted in the different percentages.

Boe et al. (2008) criticized that authors of the studies reviewed did not list their data sources, or the years in which the data were released. Boe et al. also
created a third data analysis category of teacher transfers (moving within the district), to separate them from teachers who migrate from one district to another, and those who leave the field of teaching.

Reasons why teachers leave their positions. According to Ingersoll (2001), teacher turnover, including both teachers quitting the profession and moving from school to school, is caused by many factors, including retirement, school cutback and budget concerns; personal reasons such as starting a family or health problems; overall job dissatisfaction including low pay, administrator concerns, and workload. He writes:

The data show that, in particular, inadequate support from the school administration, student discipline problems, limited faculty input into school decision-making, and to a lesser extent, low salaries, are all associated with higher rates of turnover, after controlling for the characteristics of both teachers and schools. (p. 501)

Ingersoll found that small private schools and high-poverty public schools had the highest rates of teacher turnover. The Alliance for Excellent Education (AFEE, 2005) study similarly found that at risk or lower poverty schools have roughly $50 \%$ more teacher migration than wealthier schools.

Guin (2004) looked at turnover as an indicator of the organization of the school. She argues that:

Although there is little direct evidence on how and to what extent teacher turnover negatively affects schools, there are legitimate reasons why concern is warranted. If high teacher turnover negatively affects schools
as organizations, it is likely that these schools will struggle to improve student learning. (p. 2)

In the business organizational model, negative impacts of turnover include a loss of organizational productivity, a decrease in the quality of service, and an increase in direct economic and tangible costs. In interviews with Guin, teachers reported that the constant stream of new teachers interfered with their own teaching effectiveness. Time normally spent with students was now being used to help new teachers. Teachers also reported that professional development training is wasted on people who leave; they are taking what they have learned to another school. In terms of policy, Guin writes:

Given the negative impacts described in this study, school districts and school boards that are genuinely concerned with improving lowperforming schools should begin paying attention to teacher turnover rates at the school level. Turnover is probably a symptom of a deeper problem - a school's negative reputation among teachers, a contentious relationship between school staff and the community, or some other factor that leads teachers to avoid the school. Whatever its cause, high turnover is a clear sign of trouble within a school. (p. 20)

Guin suggests exploring the organizational functioning of a school with higher rates of teacher turnover.

Costs of teacher turnover to schools and school districts. The cost involved with replacing departing teachers in the schools is staggering. Guin (2004) writes that "It is critical for school districts and school boards to recognize
that high rates of teacher turnover may result in significant costs at both the school and district level" (p. 21). The AFEE (2005) found:

A conservative national estimate of the cost of replacing public school teachers who have dropped out of the profession is $\$ 2.2$ billion [dollars] a year. If the cost of replacing public school teachers who transfer schools is added, the total reaches $\$ 4.9$ billion [dollars] a year. (p. 1) Cost estimates for individual states range between $\$ 8.5$ million dollars a year in North Dakota to $\$ 500$ million dollars a year in Texas. The National Commission on Teaching and America's Future (NCTAF, 2007) estimates the costs are even higher, at 7.3 billion dollars nationally per year.

Ingersoll (2001) argues that supply and demand theories incorrectly assume shortages in qualified teachers cause school staffing concerns. The policy response has been to increase the quantity of qualified teachers through various recruitment strategies and alternative programs. He writes:

In contrast, this analysis suggests that the imbalance of teacher supply and demand at the root of school staffing problems is neither synonymous with, nor primarily due to, teacher shortages in the technical sense of a deficit in the quantity of qualified candidates. Rather than in sufficient supply, the data indicate that school staffing problems are primarily due to excess demand, resulting from a "revolving door" - where large numbers of teachers depart their jobs for reasons other than retirement. Thus, the data suggest that the solution to staffing problems does not primarily lie in increasing supply, but rather in decreasing demand. (p. 501)

He concludes with a recommendation that teacher retention is more important than increasing the pool of qualified teaching candidates.

Mentor and induction programs have been shown to increase teacher retention, provide support and more knowledge of effective teaching techniques to inexperienced teachers, and shorten the time it takes for a new teacher to teach at the same level as an experienced teacher (AFEE, 2005). Villar and Strong (2007) found that for every dollar spent on induction programs to prevent teacher attrition, the school district saves $\$ 1.88$ over time. They found that after five years, every dollar invested in the prevention of teacher turnover will save schools, districts, and the state a combined \$1.66.

The AFEE authors found comprehensive induction programs can also address the roots of teacher dissatisfaction "by guiding their work, further developing their skills to handle the full range of their responsibilities, and evaluating their performance during the first few years of teaching" (2005, p. 3). The veteran mentor teachers also improve their skills as they coach, observe, and reflect on their own teaching. More opportunities for career growth and better pay may also benefit the mentor teachers.

Possible effects of teacher turnover on student achievement. Studies have shown the importance of hiring more effective teachers, correlating to higher levels of student achievement (Falch \& Ronning, 2005; Haycock, 1998; Ingersoll 2001, 2003; Murnane \& Steele, 2007; Sanders \& Rivers, 1996; Terry \& Kritsonis, 2008). Falch and Ronning (2005) found that student achievement had a negative relationship to teacher turnover. Their report indicates that teachers tend to move
to schools with more opportunities for students to achieve. Terry and Kritsonis (2008) argue that examination of current research indicates teacher turnover and related staffing issues are not primarily due to teacher shortages, but to an insufficient supply of qualified teachers. Moreover, Ingersoll (2001) describes a "graying" teaching force getting ready to retire, which causes schools to resort to lowering hiring standards in new teachers, resulting in less-qualified teachers in the classroom.

Using data from the Tennessee Value-Added Assessment system, Sanders and Rivers (1996) analyzed student achievement data for three years. They argue that individual teachers' influence on academic growth can be measured by student test scores. The authors use this measurement to determine three levels of teacher effectiveness; high, average, and low. In this study, they looked at the cumulative effects of teachers over three years. Students with three highly effective teachers were compared to those with three less effective teachers, and the results indicated a mean student percentile gain of 52 to 54 points in test scores. The data show that a student coming from a relatively less effective teacher into a more effective teacher's classroom will make excellent gains in test scores, but the residual effects of having a less effective teacher will still appear in future tests. They argue that within grade levels, the teacher is the single most dominant factor affecting student gains as determined by test scores:

Groups of students with comparable abilities and initial achievement levels may have vastly different academic outcomes as a result of the sequence of teachers to which they are assigned. These analyses also
suggest that the teacher effects are both additive and cumulative with little evidence of compensatory effects of more effective teachers in later grades. The residual effects of both very effective and ineffective teachers were measurable two years later, regardless of the effectiveness of teachers in later grades. (p. 6)

The authors suggest that administrators take this into account by giving lower achieving students better academic opportunities with more effective teachers.

Guin (2004) looked at an entire school district in terms of turnover rates, minority populations, and student achievement. She found that schools with higher turnover rates had fewer students meeting the state standards in reading and math. Guin also found a significant positive correlation between teacher turnover and minority populations. This is consistent with Haycock (1998) who suggested that the achievement gap can be closed if minority students are given access to the same higher quality teachers that are available in less impoverished schools. More critically, Lankford, Loeb, and Wyckoff (2002) found that teachers who leave poor urban schools are more likely to have higher skills than the teachers who choose to stay in those schools.

Murnane and Steele (2007) argue that the supply and demand model that is inherent in the hiring of teachers actually pushes effective teachers out of the classroom. Effective teachers are attracted to schools that offer higher wages, better working conditions, and other perceived benefits of that school district. They also argue that an "opportunity cost," or what is given up to become a teacher, factors into decisions to go to another school district. The lack of
effective teachers in lower income areas may be caused by teachers wanting to teach in similar schools to those they attended and by perceived problems in working conditions in lower income areas. Another concern is that as teacher demand increases, some schools may hire not based on a teacher's effectiveness, but on who can fill coaching or similar positions. Murnane and Steele report that hiring teachers who can teach two different subjects may be more desirable than one with a single specified content area.

According to Murnane and Steele, No Child Left Behind (NCLB) requirements also have put steady pressure on teachers to increase the achievement of their students. Their proposed solution to this problem is to increase salaries for all teachers, reduce barriers to enter the teaching profession (or offer alternate certifications), and make compensation more flexible (give higher wages for more education) to increase the supply of effective teachers to fill needed positions. Falch and Ronning (2005) also conclude that lower achieving schools should be able to use increased salary as a way to attract and retain quality teachers.

Research indicates that teacher effectiveness improves with experience during the early years of a teacher's career (McCaffrey, Koretz, Lockwood, \& Hamilton, 2003; Rivkin, Hanushek, \& Kain, 2000). The NCTAF (2007) concludes:

New teachers struggle, but as they gain more knowledge and experience they are able to raise student achievement. With the high rate of new teacher turnover, our education system is losing half of all teachers before
they reach their peak effectiveness. Students, especially those in at-risk schools, are too often left with a passing parade of inexperienced teachers who leave before they become accomplished educators. (p. 4)

## Music Teacher Turnover

In music education, the causes and effects of music teacher turnover are being researched, reflecting similar national and organizational issues (Gordon, 2000; Hancock, 2008; Hancock, 2009; Kloss, 2009, 2010; Madsen \& Hancock, 2002; Nimmo 1986; Scheib 2003; 2004; 2006). Analyzing the national TFS data specific to music teachers, Hancock (2009) found that the average music teacher turnover over four survey periods (1988-1989, 1991-1992, 1993-1994, and 2000-2001) was $16 \%$. He found that generally $84 \%$ of the sampled music teachers stayed at their positions each year. For these four periods, the migration rate was $10 \%$ for teachers changing schools, and $6 \%$ of teachers left the profession each year. When compared to national estimates for all teachers in those years surveyed, the rates for retention, migration, and attrition were similar for music teachers.

Looking specifically at the 2000-2001 Teacher Follow-up Survey (TFS) data, Hancock (2009) found differences in the career path status of music teachers and non-music teachers. Comparatively, more music teachers were primarily attending college, retired, working in other fields, working in education (but not teaching $\mathrm{K}-12$ ), or staying at home.

Hancock (2009) also looked at the "Anticipated return to a teaching career" responses in the 2000-2001 TFS data:

To summarize, about $39 \%$ of former music teachers planned to never return to a career as a $\mathrm{K}-12$ music teacher, whereas $34 \%$ planned to return eventually and an additional $11 \%$ planned to return by the following school year. Only $6 \%$ of former music teachers were undecided. (pp. 100-101)

He found significant differences between music teachers and non-music teachers in the responses "return to teaching within a year," with twice as many non-music teachers responding as music teachers, and "undecided," with three times as many non-music teachers responding compared to music teachers.

Hancock (2009) found that most migrating music teachers remained within the state of their original teaching position. This is likely because of several factors including the costs and certification requirements of moving to another state, the networking connections that a teacher makes within their state music education associations, and family/friends that may reside within the state. Twice as many teachers migrated to a different district compared to schools within the same district. This may be because of perceptions of better salary, benefits, administrative support, or district resources available in other school districts (Madsen \& Hancock, 2002).

Hancock (2008) used sequential logistic regression techniques with data from the 1999-2000 Schools and Staffing Survey (SASS) to predict factors that could cause higher rates of music teacher attrition. He found that younger teachers were at a higher risk of attrition. Salary becomes a more of a concern as teachers become older. Minority teachers, female teachers, and secondary school
teachers were more at risk for attrition. Hancock states that teachers with positive student achievement and supportive administrators were less likely to be at risk for attrition.

Music teacher job stress and burnout. Many studies look at the job stress and burnout of music teachers. Scheib (2004) asked eight music teachers who were leaving their jobs to respond to an open-ended email survey regarding why they were leaving. He found that there were four general response categories: (a) difficult working conditions, (b) low salary, (c) public perceptions of teaching, and (d) low priority of music education within the school curriculum. Teachers complained of feeling overworked, not having autonomy, not being adequately supported by the administration, and worrying about student enrollment.

Teachers felt that they were always rushing to prepare for the next performance, and not spending enough time actually teaching students about music. In terms of salary, "when low pay is combined with difficult working conditions and poor morale, it can create an intolerable environment" (p. 56). The perception of teachers as paid laborers instead of professionals also increases job dissatisfaction in music teachers. In another study, Scheib (2006) also argues that music teachers have different ideologies from the "factory model" of education that exists today. He concludes that new teacher expectations and realities collide which may result in "disillusionment as they attempt to negotiate feelings of betrayal, resentment, and futility" (p. 11). For these newer teachers, what was supposed to be a creative teaching life never materializes. In a previous study, Scheib (2003) also found the conflict between personal and professional roles in music teachers relates to
increased stress. Time needed to complete "unimportant" tasks also increased stress in music teachers.

Gordon (2000) found three categories of job stress prevalent among the the four cases in her multiple case study. The first was "behaviors and attitudes," which included both possible negative attitudes of students and parents, and district attitudes toward school music programs. Second, "difficulties of managing music programs" included the large number of non-musical organization tasks, time management, paperwork demands, and maintaining equipment. Third, "insufficient preparation for music teaching" may include the feelings of a lack of teaching method courses in relation to music content courses, need to develop classroom management skills, and insecurities about teaching instruments outside of a teacher's comfort area. Gordon recommends further research addressing the issues of music teacher time management and stress reduction.

Nimmo (1986) investigated the factors contributing to the attrition of band directors. He found that stress and burnout were associated with extra time commitments, low salary, unappreciative administrations, too many athletic related performances, the feeling that "nobody cares," and a desire to do something different. Younger band directors held these attitudes the most. His suggestions for band directors include having a clearly defined philosophy of music education, being able to say "no thank you," seeking a variety of personal activities outside of the profession, and reducing the amount of performances in which entertainment is the only justification. Hamann, Daugherty, and Mills
(1987) gave the Maslach Burnout Inventory to 101 music educators and reached similar conclusions:

If music teachers feel they are becoming overwhelmed by their work load and the time they have to complete that work load, if they feel they are not getting cooperation from teachers outside their area or are receiving unclear goals/directives from their administrators, then job dissatisfaction can occur, burnout levels may increase, and talented educators could then begin to question their career goals and plans, and eventually may begin to seek a change in professional careers. Based on this study, it may be assumed that as public school music educators' level of burnout increases, contentment with the job and profession decreases, which in turn may affect both the educational classroom experience and eventually the pool of quality instructors available to provide that instruction. (p. 139) The authors warn that music teacher burnout is a serious concern, and they recommend methods of coping, preventing, or reducing burnout symptoms be explored.

In 1995, Madsen and Hancock (2002) surveyed a sample population of Bachelor of Music Education graduates who had graduated in the previous ten years. Of the 137 respondents, $17.5 \%$ had chosen not to teach at that time. In 2001, another survey was sent to this same sample, and analysis of responses revealed that $34.4 \%$ of the graduates were not teaching at that time. The authors also found that the more positions teachers hold over their careers, the more likely they will be to continue in teaching. They write, "Perhaps the change in
surroundings serves to resolve personal and professional concerns or, at the very least, postpones the inevitable" (p. 14). They suggest learning more about how teachers resolve their personal and professional concerns at one site or multiple sites, or how these concerns don't resolve, potentially resulting in leaving the profession altogether. One concern that the teachers expressed was the lack of administrative support. Madsen and Hancock state:

These issues include differing understandings of the importance of music education, a perception of music as an extracurricular activity, and challenges to the content of instruction. Concerns that are more specific relate to the apathy for music education, music valued solely for utilitarian purposes, and music classes used as a respite for "academic" teachers. (p. 15)

The authors suggest research on complexities in "support" issues. Advocacy may be of use in assisting administrators and the public to understand the importance of music education. Other concerns expressed by the participating teachers include an underestimation of the amount of time involved in teaching (particularly for new teachers), the desire to stay home and raise a family, existing preferences for their own performance career over educating students, perceived lack of musical challenge, and shifts in interests to careers outside of music.

Possible benefits of teacher turnover. While many concerns about teacher turnover exist, some positive aspects may exist. According to the TFS data, Hancock (2009) notes that $28 \%$ of music teachers left the profession to attend college:

Although the details of what these former teachers were studying was not examined in the study, it is entirely possible that these teachers chose to attend graduate school to improve their credential, satisfy career goals, obtain a college teaching position, or simply have a respite from the classroom. The idea that many former music teachers are working on advanced degrees suggests that there may be a group of returning music teachers who are more qualified and ready to take on the challenges of the classroom after enjoying an intellectual retreat. Moreover, a teaching hiatus may be a positive indicator of some music educators' desire for continuous learning, which reflects well on the profession. (p. 103) Hancock does caution that these music teachers may be returning to college to pursue a different career. Teachers who pursue graduate work in music education may return positive benefits to schools who employ them after graduation.

Guin (2004) found schools with lower teacher turnover rates may see turnover as a benefit to the school. New teachers can bring fresh instructional ideas and new techniques that can benefit the school. Other teachers thought that turnover allows veterans and new teachers to work together, continually growing and learning from each other. Desirable school settings may give principals the ability to be more selective in their hiring, whereas low-income schools may not have this opportunity.

Students' attitudes toward band teachers. Studies on attitudes toward teacher turnover do not exist. Finding specific research on band student attitudes toward their teacher in general proves to be difficult. Much of the research
examines the music teacher as a factor of student motivation (Sandene, 1987; Sichivitsa, 2007). Papinchak (1992) found that communication between the parents, teacher, and student could promote student retention in string programs. If students feel they have a good relationship with their teacher, they will feel more successful.

Gouzouasis, Henrey, and Belliveau (2008) interviewed students and found that the band teacher was a small part of why students participated in band. Kloss (2009) examined Arizona marching band participation and tracked teacher turnovers over four years. Data indicated an average $8.8 \%$ drop in marching band participation in the year following each turnover. Data also revealed that marching bands with no teacher turnover had the most stable participation. In another study, Kloss (2010) examined band teacher turnover from the high school students' perspectives. Themes from interviews expressed a range of attitudes. Some students had feelings of abandonment, anger, and betrayal, while others thought a teacher change was not a "big deal." Some students expressed the love of making music and being with their friends as reasons they stayed in band after a teacher change.

Solly (1986) examined band student attrition as students progressed from elementary to middle school. She found that $17 \%$ of students that quit band would have stayed had their teacher been the same. Solly suggests having the middle school teacher be more visible at the elementary schools to meet incoming students. Being comfortable with a new teacher may increase retention.

In summary, teacher turnover is being researched from a variety of perspectives. Much of this research, though, focuses on the teacher and his or her decision to stay or leave a teaching position, the effects related to the financial cost of replacing a teacher, and possible impact on student achievement. The present study attempts to determine attitudes of high school band students before and after a teacher turnover. This is a first step in looking at the impact of teacher turnover on high school band students' attitudes.

## Attitude Research

Defining attitudes. In a chapter summarizing attitude research in music education, Cutietta (1992) sought a definition of "attitude" that would be appropriate for research in music education. Aligning with the psychologist Thurstone (1928), Cutietta defined attitude as follows:

An attitude is a firmly held mental network of beliefs, feelings, and values that is organized through an individual's experience, and that exerts a directive and dynamic influence on the individual's perception and response to all objects and situations with which it is related. Thus, attitudes are learned networks of complex interactions between facts (as believed), feelings, and values. (p. 296)

An attitude must have a focus, and defining that focus is the first step in researching attitudes. Cutietta writes "a clear definition of the object of the attitude is necessary before instruction and accurate measurement can be carried out" (p. 295). Because an attitude cannot be observed, Boyle and Radocy (1987) offer this definition:

Attitude, the most general term, connotes a predisposition toward mental or psychomotor activity with respect to a social or psychological object, event, or phenomenon. The predisposition may be either positive or negative, that is, reflecting either approach or avoidance activity. An attitude is not observable, but must be inferred from an individual's reactions to an object, event, or phenomenon. (p. 197)

Eiser (1987) offers this definition:
Attitudes . . . are not mere verbal responses, but the subjective evaluation experiences that are communicated through various channels but particularly through language. At the same time, it is insufficient to define attitudes as subjective evaluative experience if we avoid the issue of how experience is communicated and rendered public. This is why it is vital to recognize that attitudes are not just experiences, but experiences of objects with a public reference. (p. 5)

Rosenberg and Hovland (1960) define attitudes as "predispositions to respond in a particular way toward a specified class of objects" (p.1). They argue that because predispositions are not observable or measurable, they create reactions to stimuli that can be observed and interpreted. Attitudes can be observed through three response modes: Affect, Cognition, and Behavior. Rosenberg and Hovland created a model showing that the response to stimuli (objects of focus) is filtered through one of the three response modes where it can then be manifested in observable behavior (Figure 1). These three response
modes reflect the feeling, knowing, and acting concepts of ancient Greek civilization (Breckler, 1984). Boyle and Radocy (1987) state:

The categories are not discrete; an individual's thinking, feelings, and actions often are interrelated, although in varying degrees dependent upon the primary nature of the psychological activity. Affective behaviors include a significant feeling component, and a variety of terms are used to label the psychological constructs that appear to have significant feeling components: attitude, interest, preference, opinion, value, and appreciation. Perhaps the most common of these is attitude. (p. 195) Breckler (1984) writes that each mode has its own continuum of responses such as Happy/Sad (Affect), Protecting/Destroying (Behavioral) and Supporting/Derogating (Cognitive).


Figure 1. Schematic conception of attitudes. Rosenberg \& Hovland, 1960.

There are three reasons why using this model would be beneficial in music education. Eiser (1987) describes the first reason as the:
. . . resemblance to classifications used in other branches of psychology notably learning theory, where distinctions may be made between conditioned or unconditioned emotions (affect), expectancies (cognition), and operant responses (behavior). (p. 14)

When attitude measurement is one component among several dependent variables, this reason becomes particularly useful to educators. Cutietta (1992) describes the next two reasons as:
. . . the implication that attitudes are learned in response to stimuli that can be systematically provided and objectively measured. Third, the prominence of verbal statements in all three response components of attitude facilitates measurement. (p. 297)

Breckler (1984) questioned the validity of research using this model. He developed criteria for doing attitude research that separates the three modes and measures them individually. One of his criteria includes having the object of the attitudes "present," which may increase the validity of the test. He writes: If the attitude object is not physically present, then one can respond only to a symbolic or mental representation of the object. Because such responses are (presumably) mediated by one's cognitive system, observed measures may assess primarily the cognitive component, and may therefore produce inflated estimates of intercomponent consistencies. (p. 1193)

He also recommends that both verbal and nonverbal measures of affect and behavior be measured. In a study of attitudes toward snakes, Breckler asked participants in one group to handle a live snake and recorded the physiological responses (heart rate), their behavior towards the snake, and verbal responses to questions about the snake to cover each of the three modes. In a second group, there was no snake and only verbal responses (about all three modes) were collected. In both groups, results were similar. The group with the live snake, though, had more clear distinctions between each of the three modes, where the second group's results were less easily distinguished.

Attitude tests may have reliability problems, including problems related to correlations between the three response modes. Breckler (1984) writes:

It is ordinarily assumed that affect, behavior, and cognition display some degree of positive correlation. Consistency might be expected because all three components represent the experience of a single individual. High intercomponent correlations do not necessarily follow from the tripartite view. (p. 1193)

Breckler suggests that different learning situations can produce inconsistencies between the three modes. Inconsistencies may occur even if they are produced by the same learning conditions. The three response modes may be able to operate in partial or complete independence. Eiser (1984) writes:

The basic question is not how they come to be rather independent of each other, but how they come to be interpreted as interdependent and related to each other. To understand how attitudes are acquired we must address the
question both of how we acquire sets of attitude-relevant responses, and of how we acquire the capacity to reflect upon such responses and control them so that they seem meaningful to others and to ourselves. Without such a reflective capacity, attitudes cannot be thought of as organized representations of events. (p. 76)

Eiser believes it is more beneficial to make connections between inconsistencies in the modes. Some inconsistencies (between cognitive and behavioral modes, for example) can be described and used to define an attitude.

Pointing out these inconsistencies while administering a test may create reactive responses. Cutietta (1992) recommends that the researcher be aware of this problem, and take extreme care when creating the measurement instrument. He also suggests (consistent with Eiser, 1984) that verbal responses can be representative of each response mode. This means that the researcher can use verbal responses to research behavioral modes, for example.

Highly personalized attitudes, gained through the participant's own personal experience, may create a reliability problem. Test replication may not provide consistent results. The resistance to changing attitudes, or pointing out that an attitude has changed, can also make the participant aware of their own inconsistencies. Because of these inconsistencies, a reliability coefficient of above .70 is desirable, but sometimes lower coefficients are acceptable for attitude research. Cutietta (1992) recommends that rather than using a pre- and post- test design, researchers should consider a post-test only or Solomon Four Group design.

About attitude study validity, Cutietta writes:
The establishment of acceptable validity for an attitude measure is always open to criticism. Because of the abstract nature of the underlying construct of attitude, an unequivocal demonstration that the attitude was accurately measured cannot be achieved. Still, this ambiguity should not deter the researcher or teacher from attempting to measure the attitude of the groups with which they are working. The validity of a measure is greatly dependent upon accurate identification and sampling of all possible manifestations of attitude as described earlier. (p. 299) Inconsistencies between participants' written responses and their behavior should not be considered a validity issue. Cutietta (1992) reminds the researcher that such inconsistencies "rather than displaying that measurements are invalid, instead may highlight the different learning histories of each mode in relation to the stimuli in question" (p. 299).

Measuring attitudes. The scientific quantitative measuring of abstract psychological constructs such as knowledge, achievement, and attitudes is known as psychometrics, which is normally seen as a branch of psychology (Rust \& Golombok, 2009). Psychometrics has applications in educational, clinical, or occupational contexts. The development of formal measurement procedures appeared in Western educational practice during the $19^{\text {th }}$ century (Thorndike, 1997). Researchers such as Sir Francis Galton, Joseph M. Rice, E. L. Thorndike, and L. L. Thurstone contributed to the foundations of psychometrics while advancing statistical methods of analysis.

Thurstone is known for his work creating many types of psychometric scaling methods and early forms of factor analysis. His "Law of Comparative Judgment" (1927) applied physical science concepts of weights and measures to a psychological framework. As metals have different weights and densities, so do attitudes, preferences, and opinions. Quantifying the magnitude of these attitudes, preferences, or opinions in comparison to each other provides the ability to rank or order them. Thurstone's work suggested attitudes toward an object could exist along a continuum. Ferguson (1939) writes:

It is possible . . . for different people to have different acceptance values of the belief ranging from complete acceptance through neutrality to complete rejection. It is this series of acceptance values that constitutes the attitude continuum. (p. 665)

In praise of Thurstone's methods, Tuttle (1940) writes:
[Thurstone's] demonstration that attitudes can be measured constitutes a significant contribution to the science of education. The ability to classify a group according to the degree of acceptance or rejection of a given belief is a genuine advantage to anyone who wishes to know or modify the beliefs of that group. The ability to express in mathematical units the change in degree of acceptance of a given belief on the part of the group after a period of training is a necessary factor in evaluating the method of training employed. Wherever there is value in discovering the relative strength of conviction on a given topic the tests built on the Thurstone technique render high service. (p. 705)

Shortly after Thurstone's original work, Likert $(1932,1934)$ and Guttman (1950) also proposed methods that utilized measuring attitude as a place on a continuum. Many attitude measurement techniques now exist. Cutietta (1992) and Kuhn (1980) describe several techniques that apply to the measuring of attitudes in music. The first and most common category contains techniques in which the participants "self-report." Self-reporting includes answering open ended questions, rating scales, paired comparisons, summated ratings, and semantic differentials (Kuhn, 1980). Researchers ask participants to respond to questions or stimuli hoping their answers will be honest and not influenced by their peers. Rating scales, including those of Thurstone (1928) and summated rating scales of Likert (1932, 1934), ask participants to measure the intensity of attitudes they have toward a stimuli. Semantic differential scales ask participants to rate the intensity of bipolar pairs of adjectives about a concept or stimuli. Guttman Scalograms, Q-methodology, and content analysis techniques can also provide measurement of attitudes (Cutietta, 1992).

Attitudes can also be measured by observing behavior (Breckler, 1984; Cutietta, 1992; Kuhn, 1980). Usually, researchers use a timed interval as a guide, noting how many times a behavior appears. Observing the amount of time a participant listens to a piece of music would be an example of a "single stimulus listening time" behavior. Other advances in technology have made it possible for participants to manipulate a control device (Kuhn 1980), such as the Continuous Response Digital Interface (CRDI) (discussed in Colwell, 2006)

Kuhn (1980) recommends that if using a dependent measure of opinion or preference for groups of subjects, a self-report method may be the most efficient and adequate. He suggests participants not see other participants' body language while taking these tests, as it could influence their own attitudes. For experimental situations, Kuhn suggests adding behavioral measures to selfreported measures for increased precision.

Kuhn (1980) cited over 200 attitude studies in music education prior to 1980. He listed over 80 uses of rating scales alone. A sampling of current research in the measuring of attitudes in music education include socioeconomic differences in student attitudes toward instrumental music (Albert, 2006), difference in teacher verbal corrections and attitudes toward music performance (Duke \& Henninger, 1998) music degree program differences in attitudes toward teaching private lessons (Fredrickson, 2007), attitudes toward practicing (Hewett, 2001), attitudes toward using recorded models (Morrison, Montemayor \& Wiltshire, 2004), gender differences in attitudes toward learning jazz improvisation (Wehr-Flowers, 2006); and parent involvement and attitudes toward musical outcomes (Zdinski, 1996). Attitude scale construction is also used in music education to measure attitudes toward musical style (Chalmers, 1978), attitudes toward music and music participation (Nolin, 1973; Shaw \& Tomcala, 1976), and attitudes toward participation in chamber music and solo and ensemble festival (Larsen, 2010; Zorn, 1973).

In summary, research suggests that the abstract concept of attitudes can be measured by observed responses to stimuli. Following Rosenberg and Hovland
(1960), these responses can be of the cognitive, affective, or behavioral modes. Verbal responses can be used to measure all three response modes. The attitude stimulus being measured must be clearly defined. Inconsistencies between the three attitude response modes can help define the attitude further. Measurement techniques have been developed and implemented over many years. The most effective ways to measure attitudes are the self-report techniques, or direct observation. Low reliability results when measuring attitudes should not discourage researchers, as attitudes are constructed through a variety of personal experiences.

## Chapter Three: Method and Procedures

The purposes of this study were (a) to develop a reliable and valid measure of high school student attitudes toward band teacher turnover using the Thurstone (1928) equal-appearing interval scale as a model, and (b) to administer this measurement tool to determine attitudes of high school band students toward teacher turnover. This chapter describes the development and construction of Thurstone's equal-appearing intervals method of measuring attitudes. A description of the methods and procedures for the present study is also presented.

## Thurstone's Equal-Appearing Intervals Method of Measuring Attitudes

In 1928, Thurstone proposed that attitudes could be measured, and he developed a few assumptions for the work that followed. He acknowledged that an attitude "is a complex affair which cannot be wholly described by any single numerical index" (p. 520). However, the context of the attitude can be measured. Thurstone developed the following definition: ". . . attitude will be used here to denote the sum total of a man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any specified topic" (p. 531). He also defined opinion as a verbal expression that can be interpreted as a symbol of attitude. Opinions, then, could be used as the means for measuring attitudes. Thurstone writes:

There comes to mind the uncertainty of using an opinion as an index of attitude. The man may be a liar. If he is not intentionally misrepresenting his real attitude on a disputed question, he may nevertheless modify the expression of it for reasons of courtesy, especially in those situations in
which frank expression of attitude may not be well received. This has led to the suggestion that a man's action is a safer index of his attitude that what he says. But his actions may also be distortions of his attitude. (p. 532)

He gives an example of a politician who in public holds one attitude and in private may hold another. If there is no way to accurately measure the abstract concept of attitude, then opinions expressed can be interpreted and measured to represent that attitude.

According to Thurstone, measurement itself is an abstract concept: In almost every situation involving measurement there is postulated an abstract continuum such as volume or temperature, and the allocation of the thing measured to that continuum is accomplished usually by indirect means through one or more indices. Truth is inferred only from the relative consistency of the several indices since it is never directly known. We are dealing with the same type of situation in attempting to measure attitude. We must postulate an attitude variable which is like practically all other measurable attributes in the nature of an abstract continuum, and we must find one or more indices which will satisfy us to the extent that they are internally consistent. (p. 533)

Thurstone believes an attitude is not necessarily a predictor of behavior (consistent with Breckler, 1984; Cutietta, 1992; Eiser, 1984). The purpose of Thurstone's attitude measuring method is not to predict behavior, but to measure what people say they believe. Thurstone notes, "Even if they are intentionally
distorting their attitudes, we are measuring at least the attitude which they are trying to make people believe they have" (p. 533). Thurstone assumes measuring attitudes will only be effective in situations where it is reasonably expected that people will tell the truth, or in situations that offer the minimum amount of pressure on the attitude to be measured.

The goal of Thurstone's method of equal-appearing intervals is to represent the attitudes of a group represented in the form of a frequency distribution (1928). The base line of this distribution is represented on an eleven point positive/negative linear continuum. Opinions are collected and judged to represent different points on this continuum. Individuals then agree or disagree with these opinions, resulting in an attitude score. This attitude score can show not only the mean position each person lies along the scale as a whole, but also the range of opinions the participant is willing to accept, and an inference can be made to the true attitude that each person has towards the attitude variable. Thurstone writes, "It is sufficient at this moment to realize that, given a valid scale of opinions, it would be possible to compare several different groups in their attitudes on a disputed question" (p.539). The amount of homogeneity a group possesses can be compared to other groups. Thurstone summarizes the four conclusions that can be made by using his method:
(a) the average or mean attitude of a particular individual on the issue at stake, (b) the range of opinions that he [or she] are willing to accept or tolerate, (c) the relative popularity of each attitude of the scale for a designated group as shown by the frequency distribution for that group,
and (d) the degree of homogeneity or heterogeneity in the attitudes of a designated group on the issue as shown by the spread or dispersion of its frequency distribution. (p. 540)

The first step in Thurstone's equal-appearing intervals method is to specify an attitude variable and limit the measurement only to that variable. It must contain the ability to have a continuum ranging from two extreme viewpoints with more neutral ones in between.

Next, opinions about the attitude variable were collected from participants within the population being studied. The researcher can also develop opinion statements based on review of literature. Thurstone (1928) suggests:

In specifying the attitude variable, the first requirement is that it should be so stated that one can speak of it in terms "more" or "less," as, for example, when we compare the attitudes of people by saying that one of them is more pacifistic, more in favor of prohibition, more strongly in favor of capital punishment, or more religious than some other person. (p. 536)

It is very important that each statement represent various points on the continuum of that attitude variable, making sure that more than the two polar opposite opinions are included. This can also show the range of opinions a person has or is willing to endorse in their belief system. Thurstone warns:

It goes without saying that the frequent assumption of a normal distribution in educational scale construction has absolutely no application here, because there is no reason whatever to assume that any group of
people will be normally distributed in their opinions about anything. (p. 540)

This first step should conclude with a list of no more than 150 statements with varying degrees of positive and negative opinions collected from both the population being studied and the researcher's own review of relevant literature.

The next step in this method is to create points on the continuum that represent the differing levels of attitudes. Thurstone (1928) writes:

The only way in which we can identify the different attitudes (points on the base line) is to use a set of opinions as landmarks, as it were, for the different parts or steps of the scale. The final scale will then consist of a series of statements of opinion, each of which is allocated to a particular point on the base line. (p. 540)

At this point in Thurstone's method, the 150 attitude statements are given to a number of judges ${ }^{1}$ to sort into eleven categories which represent eleven equal steps along the continuum. It is important to note that these participants will not rank the statements by their own opinions of those statements, but the degree of how positive, negative, or neutral each statement is perceived.

Participants were asked to sort the statements between eleven groups on the positive/negative continuum. The first group represented the most positive statements while group eleven represented the most negative statements. Group

[^0]six was the most neutral point of the groups. Statements did not need to be distributed equally in to each of the eleven groups. Thurstone writes:

The interpretation of the base-line distances is that the apparent difference between any two opinions will be equal to the apparent difference between any other two opinions which are spaced equally far apart on the scale.

Two individuals who are separated by any given distance on the scale seem to differ in their attitudes as much as any other two individuals with the same scale separation. In this sense we have a truly rational base line, and the frequency diagrams erected on such a base line are capable of legitimate interpretation as frequency surfaces. (p. 542)

These equally spaced intervals result in form of an attitude score, which can be analyzed using parametric statistical tests. This defined rational unit of measurement is a benefit of this attitude measurement technique. Thurstone (1928) also graphed each statement by the number of times the judges placed it in each of the eleven categories.

The number of judges used to rank order these statements has been modified over time. Thurstone (1928) originally encouraged that "several hundred" persons be used for the sorting of statements, using 300 judges for his study. As researchers tested and improved this method, it was found that a lesser number of judges could still achieve the same result. For example, Ferguson (1939) found:

Results scored by Leuenberger, Uhrbrock, and myself, using the method of equal-appearing-intervals, show that scale values based upon the
responses of 50 , or even as few as 25 , persons correlate near unity with those based on the responses of three or four hundred persons.

Consequently, both because of consistency of results and because of the fact that fewer persons are required to give that consistency, the equal-appearing-interval method. . . is vastly superior to the other methods. (p. 667-668)

One of the persistent criticisms of this method is the labor involved in analyzing the judging data. Reducing the amount of judges was one way to decrease the labor. Researchers (Blunt, 1983; Rainey, 2002; Trochim, 2006) have used significantly fewer numbers of judges than the 300 used by Thurstone. The addition of computer software to analyze data is another time saving tool. For the current study, a spreadsheet table was constructed in the software program Excel (2007) which shows the frequency that each statement was placed in a category $(f)$, percentage per category (\%), and cumulative percentage across all judges ( $c p$ ). See Appendix B for the equation setup to the Excel spreadsheet software. The spreadsheet was used to reconstruct the format used by both Thurstone (1929) and Edwards (1957) in Figure 2.

| Statements | Sorting Categories |  |  |  |  |  |  |  |  |  |  | SCALE <br> Value | $\begin{gathered} \mathrm{Q} \\ \text { vALU } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | A | B | C | D | E | F | G | H | 1 | J | K |  |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |  |  |
| $f$ | 2 | 2 | 6 | 2 | 6 | 62 | 64 | 26 | 18 | 8 | 4 |  |  |
| \#1 \% | 0.01 | 0.01 | 0.03 | 0.01 | 0.03 | 0.31 | 0.32 | 0.13 | 0.09 | 0.04 | 0.02 | 6.8 | 1.7 |
| $c p$ | 0.01 | 0.02 | 0.05 | 0.06 | 0.09 | 0.40 | 0.72 | 0.85 | 0.94 | 0.98 | 1.00 |  |  |

Figure 2. Sample data spreadsheet adapted from Edwards (1957, p. 87)

The scale value $(S)$, or statistical median, of each statement is determined using the information obtained by the sorting tabulation results. The scale value in Figure 2, 6.8, was calculated using the following equation:

$$
S=l+\left(\frac{.50-\sum p_{b}}{p_{w}}\right) i
$$

Where:
$S=$ the median or scale value of the statement
$l=$ the lower limit of the interval in which the median falls
$\sum p_{b}=$ the sum of the proportions below the interval in which the median falls
$p_{w}=$ the proportion within the interval in which the median falls
$i=$ the width of the interval and is assumed to be equal to 1.0

Figure 3. Formula for a scale value. Adapted from Edwards (1957, p. 87).
In the example from Figure 3, solving the equation for the scale value looks like this:

$$
S(6.8)=6.5+\left(\frac{.50-.40}{.32}\right) 1.0
$$

The variable $l$ in the equation represents the "lower limit" of the interval. If each interval's width is 1.0 , then the lower and upper limits of each variable is .5 below and .5 above 1.0. In the example above, the median falls into group 7. The lower limit of category 7 is then, 6.5. The resulting statement scale value of 6.8 is then representative of the $7^{\text {th }}$ step on the continuum.

When all of the statements are ranked by their scale value, each statement's intensity level is further clarified with the help of the $Q$ value, or the interquartile difference between $C_{25}$ (First quartile) and $C_{75}$ (Third quartile). This is also known as a measure of the variance of the dispersion. Agreement between judges results in statements with lower $Q$ values (variance). The $Q$ value of 1.7, in Figure 2, is calculated using the following formulas:

$$
\begin{gathered}
C_{25}=l+\left(\frac{.25-\sum p_{b}}{p_{w}}\right) i \\
C_{75}=l+\left(\frac{.75-\sum p_{b}}{p_{w}}\right) i \\
Q=C_{75}-C_{25}
\end{gathered}
$$

Where:
$C_{25}=$ the $25^{\text {th }}$ percentile
$C_{75}=$ the $75^{\text {th }}$ percentile
$l=$ the lower limit of the interval in which the $25^{\text {th }} / 75^{\text {th }}$ percentile falls $\sum p_{b}=$ the sum of the proportions below the interval in which the percentile falls
$p_{w}=$ the proportion within the interval in which the percentile falls
$i=$ the width of the interval and is assumed to be equal to 1.0
$Q=$ value of the difference between the $25^{\text {th }}$ and $75^{\text {th }}$ percentile.

Figure 4. Formulas for $Q$ value. Adapted from Edwards (1957, p. 88)

In the example above, solving for $Q$ would look like this:

$$
\begin{gathered}
Q=C_{75}-C_{25} \\
\text { or } \\
Q(1.7)=\left((7.5)+\left(\frac{.75-.72}{.13}\right) 1.0\right)-\left((5.5)+\left(\frac{.25-.09}{.31}\right) 1.0\right)
\end{gathered}
$$

Statements are then reanalyzed to be included in the final study. Thurstone (1928) uses the $Q$ value to eliminate statements that are ambiguous, or not strongly represented in any specific categories. Thurstone set $Q>2.5$ for statements to be discarded. Remaining statements were then be ranked again by the scale value.

Thurstone recommended selecting twenty to thirty statements for use in the final survey (1928). Statements in the current study were selected based on representing points on the entire continuum, as well as being relevant to the study. The Thurstone equal-appearing intervals method is completed by participants responding with the dichotomous choice of "agree" or "disagree" to each statement on the final survey. Each "agree" statement's scale value is added together and divided by the number of times the participant marked "agree" to create an individual mean attitude score. Group scores, based on the mean of individual members, were then calculated.

Use of the Thurstone equal-appearing intervals method. The Thurstone equal-appearing interval attitude scale has been used recently in the field of music education. Rainey (2002) developed the "Rainey Music Attitude Scale" using Thurstone's techniques. The purpose of the research was to create a "reliable and
valid measure of attitudes toward the value of music in the public school curriculum using the Thurstone scale as a model" (p. 29). The final survey was mailed to samples of both music educators and principals, for a combined response rate of $71.2 \%$. Overall, Rainey found that principals $(M=10.22, S D$ .70) and music educators ( $M=10.39, S D .37$ ) held similar values about music education in public schools.

A critical look at the procedures found some inconsistencies between this study and the technique in which Thurstone intended. Rainey (2002) used 65 statements to represent the common themes regarding the value of music education. Thurstone (1928) suggests that "one hundred to one hundred fifty" (p. 544) statements would probably be generated by gathering opinions and through review of literature, and his 1929 study, he used 130 statements. To sort the statements, Rainey sent 200 randomly selected "university and college music faculty" (p. 29) a paper and pencil survey with the 65 statements on it. Her judges were not part of the population she was studying. The faculty members were asked to mark a box from 11 positive/negative choices, which appeared under each statement. Only 55 professors responded to the survey ( $27.5 \%$ ). Thurstone recommends "two or three hundred" (p. 545) judges be used to sort the statements, although a reduction in that number has shown to be effective (Ferguson, 1939).

After the scale value and $Q$ value of each statement was determined, Rainey (2002) included the 30 statements that met Thurstone's criteria for inclusion. A major fundamental problem of these 30 statements was that 17 of
the statements represent between 9.8 and 10.8 on the eleven point positive/negative continuum, and the remaining 13 statements represented between .1 and 2.2 on the continuum. No statements included on the final survey represent neutral attitudes between 2.3 and 9.7 on the attitude continuum. Starker differences may have been found between the principals and music educators in Rainey's study if statements representing the middle of the continuum had been included. With a polarized attitude scale, both groups may have similar results, only responding to the extreme statements. The present study included statements that represent the middle portion of the continuum.

Two other recent studies outside of music are inspired by Thurstone's equal-appearing intervals method. Blunt (1983) measured attitudes toward adult education, and Roberts (1998) measured attitudes toward character education in public schools.

## Part 1: Thurstone Method of Equal-appearing Intervals: Present Study

The purposes of this study were (a) to develop a reliable and valid measure of secondary student attitudes toward band teacher turnover using the Thurstone (1928) equal-appearing interval scale as a model, and (b) to administer this measurement tool to high school band students to determine attitudes toward teacher turnover.

Sampling procedure. A stratified random sampling procedure was selected for use in this study, which was conducted in the state of Arizona. In Arizona, high schools and high school band programs are categorized by total
school enrollment. The Arizona Interscholastic Association ${ }^{2}$ (AIA) lists schools in five divisions. Divisions are based on the following criteria: The $1 \mathrm{~A}, 2 \mathrm{~A}$, and 3A divisions each equally divide $1 / 3$ of all schools under 1200 students, while 4 A and 5A divisions divide the remaining schools with more than 1200 students enrolled. Every two years, the AIA reevaluates which schools are in which division. For the 2010 - 2011 academic year, schools were grouped as follows: Division 1A = schools with less than 250 students, Division $2 \mathrm{~A}=$ schools with $251-500$ students, Division 3A = schools with $501-1200$ students, Division 4A $=$ schools with $1201-1900$ students, and Division $5 \mathrm{~A}=$ schools $1901+$ students.

Only four-year high schools with a single band teaching position were included in this study. Schools with more than one band director (e.g. head and assistant) or high schools with fewer than four grade levels were not included. Qualifying information about each school was obtained from AIA and AMEA web sites, therefore schools that did not participate in the Arizona Interscholastic Association or Arizona Music Educators Association (AMEA) sponsored activities during the year of this study were ineligible. For the purpose of this study, 139 high school band programs that met the selection criteria were identified.

Next, schools with new band teachers or teachers in their second year after a teacher turnover were identified using AIA and AMEA teacher directories. In all, six of the 139 schools had a new teacher during the year of the study, and

[^1]another six schools were determined to be in their second year after a teacher turnover.

Schools were divided into three division groups (schools in Divisions 1A -3 A were combined into one category for statistical purposes): $1 \mathrm{~A}-3 \mathrm{~A}=33,4 \mathrm{~A}$ $=55$, and $5 A=51$. Schools in each group were sorted alphabetically and numbered from 1 to 33,1 to 55 , and 1 to 51 respectively. A random number generator ${ }^{3}$ was used to create a random string of numbers for each division, without repeating numbers in the sequence. Three schools and two alternates were selected by the random number string from each division category. In order to also represent views of students with varying levels of turnover, the random string of numbers was followed until the first schools with differing levels of turnover for each division were selected. These schools were added to the sample in each division group for a total of 12 schools.

Following procedures approved by the university's Institutional Review Board, band teachers were then sent an invitation to participate in the study. If the invitation was accepted, a message was then sent to the school principal describing the study and requesting permission for the band teacher and students to participate. Some of the principals gave their permission immediately, with no further paperwork needed. Some principals directed the researcher to the district administrator in charge of research requests and further information was supplied. Some principals or band teachers did not respond to the invitation. In these cases,

[^2]randomly selected alternate schools were invited to join the study. Approved consent/assent forms were sent to the band teacher of each participating program.

Of the original twelve band programs invited to participate in this study, seven participated in the first phase of the study. In the second phase of the study, one teacher declined further participation and two were added for a total of 8 schools. In the third phase of the study, one school was added, and one school did not return surveys, for a total of 8 . Schools were added based on an attempt at equal sizes of teacher turnover experience levels for more consistent statistical analysis. Ten total high school band programs participated throughout the study. Table 1 lists the schools and their student participation throughout the study.

Table 1
School and Student Participation

| School <br> Number | Turnover <br> Experience | Division | Phase <br> One | Phase <br> Two | Phase <br> Three |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | No Turnover | 5 A | 28 | 13 | 46 |
| 2 | No Turnover | 5 A | 18 | 15 | 105 |
| 3 | First Year | 2 A | 5 | 7 | 11 |
| 4 | First Year | 5 A | 121 | 15 | 131 |
| 5 | First Year | 4 A | 18 | 10 | 0 |
| 6 | Second Year | 3 A | 22 | 5 | 60 |
| 7 | No Turnover | 5 A | 0 | 10 | 68 |
| 8 | No Turnover | 4 A | 0 | 20 | 60 |
| 9 | Second Year | 4 A | 0 | 0 | 40 |
| 10 | First Year | 3 A | 4 | 0 | 0 |

## Phase One procedure.

Purpose: To collect opinions, beliefs and attitudes towards teacher turnover from both a review of literature and participant survey.

Data Collection: Survey (Appendix A)
Participants: 216 students from seven Arizona high schools
Results: 501 unique statements were collected from this survey and review of literature (Appendix C).

Figure 5. Summary of Phase One.

The purpose of the first phase of the method was to collect opinions, beliefs, and attitudes towards teacher turnover from both a review of literature and from the participants themselves. An open-ended survey was created (Appendix A) and approved by the Institutional Review Board. The survey asked students to generate positive, negative, and neutral opinions they may have towards a band teacher turnover. Specifically, they were asked to give two positive, two negative, and two neutral opinions to a stimulus prompt of "Imagine you just found out that your band teacher is leaving at the end of the school year." The researcher also added statements from a review of literature. The survey was distributed in December, 2010.

Although senior students may not have the same experience as other students after a teacher turnover, they were still included in this study. In the instructions, seniors were asked to "please fill this out imagining this situation was happening to you even though you may not feel all of the effects of a teacher turnover after graduation."

A total of 216 students completed their permission forms and responded to the survey. The demographics collected from the participants included gender, grade level, and turnover experience of the respondents. In this phase, $52 \%$ ( $n=$ 112) were male and $48 \%(n=104)$ were female. By grade level, $33.8 \%(n=73)$ were freshmen, $23.6 \%(n=51)$ were sophomores, $19.9 \%(n=43)$ were juniors, and $22.7 \%(n=49)$ were seniors. Of the three turnover experience levels, $21.3 \%$ ( $n=46$ ) represented schools with no turnover, $66.2 \%(n=143)$ represented the first year of a new teacher group, and $12.5 \%(n=27)$ represented the second year
of a new teacher group. At least one school represented each of the 1A-3A, 4A, and 5A division groups.

A total of 501 unique statements were collected from the open-ended survey and review of literature. Repeated statements were noted in a separate frequency column. Each statement was placed in a category by the topic of the statement for organizational purposes, as well as to keep track of similar statements. Some of the categories included statements specifically about a teacher turnover, feelings toward the turnover, expectations of a new teacher, and the quality of their current teacher. In each category, statements were then condensed further by combining all similarly worded statements, still keeping track of the frequencies of these similar statements. Statements were also screened for ambiguity, relevance, and quality in the manner suggested by Thurstone and Chave (1929). Statements with more than one focus ("double barreled") were either split into two statements, or discarded. A list of 176 useable statements was created from this filtering process. A final list of 150 statements was selected by the researcher for use in the next phase of the study based on the appropriateness of the statement, relevance to the study, and on the frequency which students contributed each statement. See Appendix D for the final statement list.

A further test of validity was administered to ensure that all three attitude response modes (affect, cognition, and behavior) were represented in this study, as suggested by Cutietta (1992). The list of 150 statements was given to three colleagues. They were asked to rate if each statement represented a feeling
(Affect), behavior (Behavior), or belief (Cognition). Of the 150 statements, the judges consensus was that 43 (29\%) represented Affect, 23 (15\%) represented Behavior, and 83 (55\%) represented Cognition. One of the strengths of Thurstone's method is the use of participants' opinions to create the attitude scale, therefore the researcher decided not to change the wordings of the statements to represent each category equally out of respect of the authenticity of the students' responses.

## Phase Two procedure.

Purpose: Participants judged statements in terms of how positive, negative, or neutral each statement was perceived. Statements were then selected for inclusion on the final survey instrument based on their scale value and $Q$ values.

Data Collection: 150 statements were sorted into eleven categories along a positive and negative continuum. Frequency data were analyzed to determine a scale value and $Q$ value for each statement.

Participants: 95 students from eight Arizona high schools (six that participated in Phase One)
Results: Ninety-three statements met Thurstone's qualifications for inclusion in the final survey. Of these statements, 29 were selected for the final survey instrument. (Appendix D)

Figure 6. Summary of Phase Two.
The purpose of this phase of the study was to have participants judge the 150 statements in terms of how positive, negative, or neutral each was percieved. These "judges" were participants from the study (band students), as suggested by Edwards (1957) and Trochim (2006). An attempt was made to include 100
participant judges. One school declined participation for the remainder of the study, citing lack of student permissions. To increase participation in the judging process, two alternate schools next on the randomly generated list were invited and agreed to participate. In all, 95 students from 8 high schools participated in sorting the statements. This is well above the minimums of $25-50$ recommended by Ferguson (1939), but below the "several hundred" that Thurstone (1928) suggests. Band teachers were asked to randomly select five students, representing both genders and each grade level, at each school. Between 5 and 20 students participated at each school, depending on how many band classes were made available through the band teacher. Judging occurred in January of 2011.

Of the 95 students, $55.8 \%(n=53)$ were male and $44.2 \%(n=42)$ were female. By grade levels, $31.6 \%(n=30)$ were freshmen, $24.2 \%(n=23)$ sophomores, $23.2 \%(n=22)$ juniors, and $21.1 \%(n=20)$ seniors. By turnover experience, $61.1 \%(n=58)$ of the students were in the non-turnover group, $33.7 \%$ ( $n=32$ ) of the students were in the first year of a new teacher group, and the remaining $5.3 \%(n=5)$ students came from the second year of a new teacher group.

To accomplish the judging phase, each statement (and statement number) was printed on a 2 " X 4 " label. Labels were then affixed to one of five sets of note cards. Each set was a different color to avoid mixing the cards. Five sorting stations were created by connecting two poster boards together, lengthwise. Each poster board included written instructions and eleven printed 3" X 5" boxes which
represented the eleven steps on a positive/negative continuum. Box 1 was labeled positive, box 6 labeled neutral, and box 11 was labeled negative. Students were asked to place each of the 150 statements in one of these eleven boxes based on how positive or negative their perception of that statement was as compared to the other statements.

In the instructions, participants were asked to work alone and not to place more than 30 cards in any one box, as per Thurstone's recommendation (1928). Five participants at a time spent between 20 and 30 minutes doing this activity. When completed, the researcher noted where each card was placed on a separate tabulation sheet. After each judging activity, the note cards were shuffled three times, for randomization, and placed back into a single organized pile on the posterboard. The researcher was present in the room for all of the judging sessions to answer questions and monitor progress.

To analyze judging data, the frequency of each statements placement in each of the eleven boxes was recorded into an Excel spreadsheet set up for using Thurstone's scale-value and $Q$ value equations (Appendix C). The scale value for each statement was calculated from the equation in Figure 3 (p. 43). This value represents the consensus point on the positive/negative continuum as defined by the judges. The $Q$ value for each statement was also calculated, representing the interquartile range (variance), from the equations in Figure 4 (p. 44). See Appendix D for the Phase Two judging results.

Ninety-three of the 150 statements qualified for inclusion in the final survey. To qualify, the statement needed to have a $Q$ value of less than 2.5
(Thurstone, 1929). This signifies the strength of the judge's agreement of where on the continuum this statement belongs. Qualifying statements were then placed in ranking order, based on their scale values, from most positive (2.52) through most negative (10.67).

Thurstone and Chave (1929) suggest choosing statements that represent as many points along the continuum as possible, and not to choose only from the two extremes. If two statements have similar scale values, it is suggested that the statement with the lower $Q$ value should be the one selected. The number of statements that should be included for the final study varies in range from "about twenty" (Thurstone, 1928), to 45 used in 1929 (Thurstone \& Chave).

The following procedure was used to divide the 93 statements equally and to select statements from multiple points along the continuum. All of the statements were divided first by the scale value whole numbers $(2,3,4,5,6,7,8$, 9 , and10), then again by the lower limit of each whole number (whole number .5 , or $2.5,3.5,4.5$, etc) to create approximately 20 groups along the continuum. One statement from each of these groups was selected based on both the appropriateness of the statement and its qualifying $Q$ value. Another nine statements were added based on their relevance and appropriateness for a total of 29 statements on the final survey instrument. The 29 statements were rank ordered from positive to negative and a random number generator ${ }^{4}$ was used to create a randomized placement on the survey. See Appendix E for the scale values of the final survey statements in the present study.

[^3]
## Phase Three procedure.

Purpose: A final survey constructed and sent to students at 8 high schools. Data Collection: Students were asked to indicate whether they "Agree" or "Disagree" with each of the 29 statements. A mean score of the scale values of all "Agree" statements was calculated. Students were asked also to respond in a Likert-type manner to 10 more statements. One open-ended question was also included on the final survey. See Appendix E for the survey.

Participants: 521 students from eight Arizona high schools. Seven schools participated in previous phases of this study.

Figure 7. Summary of Phase Three.
Three high schools from the randomly selected alternate list were invited to participate in the Phase Three final survey instrument. In February, 2011, the survey was sent to a total of eleven Arizona high schools, eight of which previously participated in earlier phases of this study. Students were asked to indicate whether they "agree" or "disagree" with each of the 29 statements. Mean scores of the scale values of all "agree" statements were calculated. After several weeks, eight high schools responded for a total of 521 completed surveys.

The demographics of the 521 participants revealed $51.2 \%(n=267)$ males and $48.8 \%(n=254)$ females completed surveys. By grade level, $33 \%(n=172)$ were freshmen, $27.4 \%(n=143)$ were sophomores, $21.7 \%(n=113)$ were juniors, and $17.9 \%(n=93)$ were seniors. By turnover groups, $53.6 \%(n=279)$ of the students were in the non-turnover group, $27.3 \%(n=142)$ of the students were in the first year of a new teacher group, and the remaining $19.2 \%(n=100)$ of the students came from the second year of a new teacher group.

## Part 2: Likert-type and Open-ended Questions

On the back page of the survey instrument, an additional 10 statements (that may not have qualified for the final survey in Thurstone's method) were added to the study. Statements representing both positive and negative views were selected for inclusion based on researcher interest in how the students would respond. Students were asked to respond with a standard five-point Likert-type scale of Strongly Agree, Agree, Neither Agree or Disagree, Disagree, or Strongly Disagree. Standard point values were assigned for the Likert-type responses of Strongly Agree (5), Agree (4), Neither Agree or Disagree (3), Disagree (2), and Strongly Disagree (1).

One last open-ended question was included at the end of the survey, "Is there anything else you would like to tell me about how you would feel toward a band teacher turnover?" A total of 84 students (16\%) submitted responses to this question.

In summary, the Thurstone method of equal-appearing intervals was followed to construct an attitude measurement instrument in three phases and was then used to measure high school band students' attitudes toward teacher turnover. In the present study, opinions toward teacher turnover were collected from 216 high school band students, and were combined with statements collected from a review of literature. A total of 501 statements were collected, filtered, and condensed to 176 from which 150 were selected to be judged and sorted. Ninetyfive high school band students sorted the statements into eleven categories, representing eleven equal points on a positive/negative continuum. Analysis of
the sorting results indicated that 93 of the statements qualified for inclusion on the final measurement instrument. Twenty-nine statements were selected, and students were asked to choose from the dichotomous choice of "agree" or "disagree" for each statement. This resulted in an individual attitude score. Another 10 statements were added to the second page of the survey instrument, with students responding to each statement with a Likert-type five-point scale. A final open-ended question was also included on the second page of the survey instrument.

Descriptive statistics and two Three-way (2 X 4 X 3) ANOVAs were used to analyze the data to address the research questions. Post hoc and follow up tests to the ANOVAs were performed when appropriate. Pearson product-moment correlations were also performed to address research questions.

## Chapter Four: Results

The purposes of this study were (a) to develop a reliable and valid measure of secondary student attitudes toward band teacher turnover using the Thurstone (1928) equal-appearing interval scale as a model, and (b) to administer this measurement tool to determine attitudes of high school band students toward teacher turnover.

The reliability of the attitude instrument constructed for this study using Thurstone's equal-appearing intervals method was tested for internal consistency using Cronbach's Alpha ( $\alpha$ ). A coefficient of .54 was achieved. This is lower than the .7 recommended by Cutietta (1992), who states that lower coefficients can be explained by ambiguities in the attitude being measured. Lower coefficients, although tolerated, can affect the confidence with which the researcher can make decisions based on the measurement results. Further commentary about the reliability of the instrument and the Thurstone method appears in Chapter 5.

This chapter addresses the second research purpose: measurement of attitudes of high school band students toward teacher turnover. Student response data were analyzed and compared by gender, grade level, and teacher turnover experience to determine whether significant differences existed. This chapter presents the results of the final survey that was completed by 521 high school band students. Results are reported below.

## Part 1: What Are High School Band Students' Attitudes Towards Teacher

 Turnover?To address the first research question, descriptive statistics that quantify school band students' attitudes toward band teacher turnover are reported in this section. For statements 1-29 of the survey (Thurstone method), the students' attitude scores were generated by taking the mean of the scale values of the statements in which students marked "agree." The range of possible attitude scores is 1 (representing the most positive attitude) through 11 (representing the most negative attitude). Scores ranged from the most positive at 3.66 to the most negative score, 9.34. The overall mean student attitude score was $6.23(S D=$ $0.94)$. The mean score is within the "neutral" point on the eleven point continuum. The median score was 6.17 . The skewness of the curve is .42 and the kurtosis was -.12 . These numbers are within the -1 to +1 range for a normally distributed curve. This indicates that the mean attitude toward teacher turnover is neutral. A histogram of the frequency of the individual attitude scores for all participants can be seen in Figure 8.


Figure 8. Frequency of overall attitude scores.
Data were analyzed by the independent variables of gender, grade level, and the type of teacher turnover experience. Overall gender scores were similar to the overall mean score for all attitudes. The mean score for males was 6.21 $(S D=.95)$ and for females was $6.26(S D=.92)$. The means indicate that attitudes toward teacher turnover are neutral for both males and females. The graphs in Figure 9 show that more male students responded in the 5.5 to 5.75 range (slightly positive) while female students had two points of higher frequency between the 5.0 to 5.5 range (slightly positive) and the 6.25 to 6.75 range (slightly negative).


Figure 9. Frequency of attitude score by gender.
Overall scores by grade level again were similar to the overall normal distribution of the attitude scores. The freshmen had a mean score of $6.22(S D=$ $.88)$, sophomores $6.28(S D=.92)$, juniors $6.21(S D=1.01)$, and seniors $6.21(S D$ $=.99)$. The mean scores indicate that attitudes toward teacher turnover in all grade levels were neutral. The graphs in Figure 10 show the frequency of attitude scores by grade level.


Figure 10. Frequency of attitude score by grade level.
Mean scores by the type of turnover experience were similar to the overall mean score. The no turnover group mean attitude score was $6.40(S D=.91)$, the first year of a new teacher group was $5.74(S D=.81)$, and the second year of a new teacher group was $6.47(S D=.95)$. The no turnover and second year of a turnover groups both had similar mean scores slightly negative towards teacher turnover, while the first year of a new teacher group had a slightly more positive mean score. This shows that in the year following a teacher turnover, attitude scores were slightly more positive than those who have not experienced a teacher turnover, or those in their second year after a teacher turnover. Still, attitude scores toward teacher turnover are neutral regardless of teacher turnover
experience type. Figure 11 shows a histogram of the frequency of attitude scores by turnover experience.


Figure 11. Frequency of attitude score by turnover experience.

## Inferential Statistics for Research Questions 2 - 5

The means and standard deviations of the attitude scores as a function of the three independent variables are presented in Table 2. The data in this table show a trend of slightly more positive attitude scores from students who have just experienced a teacher turnover. In all cases, these students have the most positive attitude scores (lower means) when compared to students in the other two turnover categories. All means are well within what is considered neutral on the attitude scale.

Table 2
Means and Standard Deviations of Attitude Score by Independent Variable

| Gender | Grade Level | Turnover Experience | Mean | $S D$ |
| :---: | :---: | :---: | :---: | :---: |
| Male | Freshman | No Turnover | 6.43 | . 95 |
|  |  | First Year | 5.93 | . 80 |
|  |  | Second Year | 6.62 | . 91 |
|  | Sophomore | No Turnover | 6.16 | . 96 |
|  |  | First Year | 5.87 | . 84 |
|  |  | Second Year | 6.67 | . 98 |
|  | Junior | No Turnover | 6.43 | 1.00 |
|  |  | First Year | 5.38 | . 54 |
|  |  | Second Year | 6.05 | . 58 |
|  | Senior | No Turnover | 6.48 | . 93 |
|  |  | First Year | 5.35 | . 55 |
|  |  | Second Year | 6.35 | 1.11 |
| Female | Freshman | No Turnover | 6.29 | . 83 |
|  |  | First Year | $5.53$ | . 44 |
|  |  | Second Year |  | . 71 |
|  | Sophomore | No Turnover | 6.41 | . 82 |
|  |  | First Year | $6.07$ | . 94 |
|  |  | Second Year | 6.60 | . 96 |
|  | Junior | No Turnover | 6.69 | . 94 |
|  |  | First Year | 5.71 | 1.00 |
|  |  | Second Year | 6.17 | 1.11 |
|  | Senior | No Turnover | 6.05 | . 79 |
|  |  | First Year | 5.85 | 1.37 |
|  |  | Second Year | 6.38 | 1.03 |

Note: Scale values represent (1) extremely positive to (11) extremely negative.

A three-way (2 X 4 X 3) ANOVA was conducted to evaluate the effects of gender, grade level, and turnover experience on the overall attitude score to examine interactions between variables. This three-way ANOVA design produces seven outcomes, including the three main effects, three two-way interactions, and one three-way interaction. Table 3 contains a summary of the ANOVA analysis results.

Table 3
ANOVA Summary Table for Analysis of Attitude Scores by Gender, Grade
Level, and Turnover Experience

| Source | $S S$ | $d f$ | $M S$ | $F$ | $p$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Gender (G) | 332.000 | 1 | .332 | .422 | .516 |
| Grade Level (GL) | 3.933 | 3 | 1.311 | 1.669 | .173 |
| Turnover Experience (TE) | 38.869 | 2 | 19.435 | 24.736 | .000 |
| G X GL | 2.359 | 3 | .786 | 1.001 | .392 |
| G X TE | .563 | 2 | .281 | .358 | .699 |
| GL X TE | 9.782 | 6 | 1.630 | 2.075 | .055 |
| G X GL X TE | 4.347 | 6 | .724 | .922 | .479 |
| Error | 390.487 | 497 | .786 |  |  |

The ANOVA results indicate a significant main effect for turnover experience $F(2,497)=24.74, p<.01$, partial $\eta^{2}=.09$. The partial eta squared effects size statistic indicates the proportion of the variance of the dependent variable that is explained by the independent variable. In this case, $9 \%$ of the variance is explained by the turnover experience of the students. Attitude score means (with standard deviations in parentheses) for the three levels of turnover experience were 6.40 (.91) no turnover, 5.74 (.81) first year of a teacher turnover, and 6.47 (.95) second year of a teacher turnover. Students in their first year of a
new teacher had mean attitude scores slightly more positive towards teacher turnover than did both the no turnover and second year turnover group.

A post hoc comparison among levels of turnover experience was calculated using a Tukey HSD test with a significance level of .05 . The slightly positive attitude scores for students in their first year after a teacher turnover were significantly different from both the no turnover and second year of a teacher turnover groups. There was no significance between the no turnover and second year of a teacher turnover groups. Results were confirmed by a pairwise comparison analysis based on estimated marginal means. The first year of a new teacher was significantly different from both the no turnover and second year of a teacher turnover groups, $p<.001$.

No significance was found between the main effects of gender $F(1,497)=$ $.42, p=.52$, partial $\eta^{2}=.001$, and grade level $F(3,497)=1.67, p=.17$, partial $\eta^{2}$ $=.01$. No significance was found in the interactions between gender and grade level $F(3,497)=1.00, p=.39$, partial $\eta^{2}=.01$, gender and turnover experience $F(2,497)=.36, p=.70$, partial $\eta^{2}=.001$, or gender, grade, and turnover experience $F(6,497)=.92, p=.48$, partial $\eta^{2}=.01$. The interaction between grade and turnover experience was almost significant, but the effect size would still be considered "small," $F(6,497)=2.08, p=.06$, partial $\eta^{2}=.02$.

Each Thurstone statement (1-29) was then analyzed by the overall percentage of students who marked "agree" as a response. Table 4 lists each of the 29 statements, their scale value, and the total percentage of agreement. The
scale value represents the point at which each statement is located on the continuum between positive (1), neutral (6), and negative (11).

Table 4
Thurstone Statement, Scale Value, and Percentage of Overall Agreement

| \# | Scale <br> Value | Statement | Percentage of Agreement |
| :---: | :---: | :---: | :---: |
| 1 | 6.05 | I don't know if a teacher change would make things better or worse. | 55.1\% |
| 2 | 2.84 | A new teacher might attract more students to join band. | 26.1\% |
| 3 | 4.76 | It would take a while, but I would get used to a new band teacher. | 73.5\% |
| 4 | 3.66 | A new teacher may put more effort into our program. | 29.9\% |
| 5 | 8.03 | A new teacher will have their own ideas, and may not listen to our traditions. | 73.5\% |
| 6 | 6.77 | I would have to get used to a new teacher, new rules, and new traditions. | 75.4\% |
| 7 | 6.14 | Nobody knows what to expect from a new teacher. | 84.1\% |
| 8 | 10.57 | The band program will be ruined if our teacher leaves. | 28.8\% |
| 9 | 7.64 | I would be nervous about the future of our program if our teacher decided to leave. | 68.1\% |
| 10 | 3.98 | Although we were used to the old teacher, we could use some new changes. | 32.8\% |
| 11 | 8.28 | Our band, under a new teacher, will not be as good. | 36.3\% |
| 12 | 3.82 | Even though I would miss my teacher, I might like a new one as much or better. | 44.5\% |
| 13 | 4.48 | Getting a new teacher would not be all that bad. | 38.8\% |
| 14 | 7.32 | Change is sometimes bad. | 65.8\% |
| 15 | 2.52 | I would make the best of a teacher change. | 65.8\% |
| 16 | 10.67 | If my current band teacher left, I would quit band. | 11.5\% |
| 17 | 6.03 | Teachers come and go, it's just another teacher. | 18.4\% |

Table 4 (Continued)

## Statement, Scale Value, and Percentage of Overall Agreement

| \# | Scale <br> Value | Statement | Percentage of Agreement |
| :---: | :---: | :---: | :---: |
| 18 | 9.35 | I would not trust a new teacher coming to my school. | 13.8\% |
| 19 | 7.84 | I would be wary of losing band traditions. | 66.0\% |
| 20 | 8.78 | A teacher change would be very stressful for the program. | 49.5\% |
| 21 | 10.17 | Our band program would fall apart and become undisciplined. | 26.7\% |
| 22 | 3.26 | There is always something new to learn from a different teacher. | 71.4\% |
| 23 | 5.65 | A teacher change would not bother me. | 23.6\% |
| 24 | 5.99 | There are both positive and negative feelings about my band teacher leaving. | 67.8\% |
| 25 | 8.48 | I would be disappointed and worried about our band's future. | 46.6\% |
| 26 | 9.91 | I would not be helpful to a new teacher, they can figure it out on their own. | 8.4\% |
| 27 | 5.86 | A new teacher will create both good and bad memories. | 61.4\% |
| 28 | 5.58 | I would expect some changes to the band program, but they should try and keep things the same. | 71.2\% |
| 29 | 5.8 | Things will not change that much. | 12.9\% |

Note: Scale values represent (1) extremely positive to (11) extremely negative.
The relationship between the scale value of a statement and the overall
percentage of agreement (as shown in Table 4) was investigated using Pearson product-moment correlation. A weak negative correlation, $r=-.29, n=29, p=$ .13 , was found, but it was not significant at the .05 level.

The five statements with the highest overall percentage of agreement
were:
S7. "Nobody knows what to expect from a new teacher" $(M=84.1 \%)$;
S6. "I would have to get used to a new teacher, new rules, and new traditions" $(M=75.4 \%)$;

S3. "It would take a while, but I would get used to a new teacher" ( $M=$ 73.5\%);

S5. "A new teacher will have their own ideas, and may not listen to our traditions" ( $M=73.5 \%$ ); and

S22. "There is always something to learn from a different teacher" $(M=$ 71.4\%).

Four of the five statements indicate that there is some degree of uncertainty about the new teacher with respect to rules, traditions, and expectations. Scale values for statements $3,5,6$, and 7 , range from 4.76 to 8.03 representing the neutral area of the positive/negative continuum. In other words, these neutral statements had the highest level of agreement. Agreement with statement 22, with a scale value of 3.26 (toward the positive end of the scale), shows a degree of optimism about what can be learned from a new teacher.

The five statements with the lowest overall percentage of agreement were:
S26. "I would not be helpful to a new teacher, they can figure it out on their own" $(M=8.4 \%)$;

S16. "If my current teacher left, I would quit band" ( $M=11.5 \%$ );
S29. "Things will not change that much" ( $M=12.9 \%$ );

S18. "I would not trust a new teacher coming to my school" $(M=13.8 \%)$; and

S17. "Teachers come and go, it's just another teacher" ( $M=18.4 \%$ ). Scale values for statements 16,18 , and 26 , range from 9.35 to 10.67 representing the negative area on the continuum. Students' responses indicate less agreement towards these negative statements, showing that they would neither oppose the teacher nor quit band because of a teacher change. Students also tended not to agree with statements 17 and 29. Both are neutral statements and have scale values representing the neutral point on the continuum. That students do not agree shows at least some level of misgiving about new teachers.

The percentage of agreement for the Thurstone statements (1-29) was then examined by the levels of each independent variable to investigate which, if any, statements had a greater impact on specific groups of students. Table 5 shows the percentage of agreement by the levels of each independent variable (gender, grade level, and turnover experience). An interpretation by independent variable and levels within variables is presented after the table.
Table 5

| \# | Scale <br> Value | Statement | Male | Female | Freshman | Sophomore | Junior | Senior | No <br> Turnover | First <br> Year | Second Year | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 6.05 | I don't know if a teacher change would make things better or worse. | 50.2\% | 60.2\% | 62.2\% | 58.7\% | 50.4\% | 41.9\% | 56.6\% | 57.7\% | 47.0\% | 55.1\% |
| 2 | 2.84 | A new teacher might attract more students to join band. | 27.7\% | 24.4\% | 28.5\% | 25.2\% | 24.8\% | $34.4 \%$ | 25.4\% | 28.2\% | 25.0\% | 26.1\% |
| 3 | 4.76 | It would take a while, but I would get used to a new band teacher. | $71.5 \%$ | 75.6\% | 74.4\% | 75.5\% | 65.5\% | 78.5\% | 75.6\% | 69.7\% | 73.0\% | 73.5\% |
| 4 | 3.66 | A new teacher may put more effort into our program. | $33.0 \%$ | 26.8\% | 29.1\% | 32.9\% | 30.1\% | 26.9\% | 18.6\% | 52.1\% | 30.0\% | 29.9\% |
| 5 | 8.03 | A new teacher will have their own ideas, and may not listen to our traditions. | 71.5\% | 75.6\% | 72.7\% | 74.1\% | 71.7\% | 76.3\% | 79.6\% | 63.4\% | 71.0\% | 73.5\% |
| 6 | 6.77 | I would have to get used to a new teacher, new rules, and new traditions. | 74.9\% | 76.0\% | 76.7\% | 76.2\% | 68.1\% | 80.6\% | 76.7\% | 70.4\% | 79.0\% | 75.4\% |


| \# | Scale <br> Value | Statement | Male | Female | Freshman | Sophomore | Junior | Senior | No <br> Turnover | First Year | Second Year | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | 6.14 | Nobody knows what to expect from a new teacher. | 84.3\% | 83.9\% | 86.6\% | 86.7\% | 80.5\% | 79.6\% | 86.0\% | 82.4\% | 81.0\% | 84.1\% |
| 8 | 10.57 | The band program will be ruined if our teacher leaves. | 26.6\% | $31.1 \%$ | 29.7\% | 30.1\% | 25.7\% | 29.0\% | 34.1\% | 9.8\% | 41.0\% | 28.8\% |
| 9 | 7.64 | I would be nervous about the future of our program if our teacher decided to leave. | 64.8\% | 71.7\% | 69.2\% | 67.8\% | 68.1\% | 66.7\% | 75.6\% | 51.4\% | 71.0\% | 68.1\% |
| 10 | 3.98 | Although we were used to the old teacher, we could use some new changes. | 32.6\% | $33.1 \%$ | 29.1\% | 33.6\% | $32.7 \%$ | 38.7\% | 28.3\% | 48.6\% | 23.0\% | 32.8\% |
| 11 | 8.28 | Our band, under a new teacher, will not be as good. | 36.0\% | $36.6 \%$ | 34.3\% | 37.8\% | $36.3 \%$ | 37.6\% | 42.7\% | 16.9\% | 46.0\% | 36.3\% |
| 12 | 3.82 | Even though I would miss my teacher, I might like a new one as much or better. | 47.6\% | 41.3\% | 48.8\% | 46.2\% | 38.9\% | 40.9\% | 35.1\% | 67.6\% | 38.0\% | 44.5\% |
| 13 | 4.48 | Getting a new teacher would not be all that bad. | 41.9\% | 35.4\% | 40.1\% | 42.7\% | 29.2\% | 41.9\% | 32.6\% | 52.1\% | 37.0\% | 38.8\% |
| 14 | 7.32 | Change is sometimes bad. | 66.3\% | 65.4\% | 70.9\% | 67.8\% | 61.1\% | 59.1\% | 65.6\% | 62.7\% | 71.0\% | 65.8\% |


| \# | Scale Value | Statement | Male | Female | Freshman | Sophomore | Junior | Senior | No <br> Turnover | First <br> Year | Second Year | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15 | 2.52 | I would make the best of a teacher change. | 64.8\% | 66.9\% | 67.4\% | 55.2\% | 69.0\% | 75.3\% | 64.9\% | 74.6\% | 56.0\% | 65.8\% |
| 16 | 10.67 | If my current band teacher left, I would quit band. | 10.5\% | 12.6\% | 12.2\% | 12.6\% | 10.6\% | 9.7\% | 14.7\% | 4.2\% | 13.0\% | 11.5\% |
| 17 | 6.03 | Teachers come and go, it's just another teacher. | 18.0\% | 18.9\% | 20.9\% | 20.3\% | 11.5\% | 19.4\% | 18.6\% | 17.6\% | 19.0\% | 18.4\% |
| 18 | 9.35 | I would not trust a new teacher coming to my school. | 16.1\% | 11.4\% | 14.5\% | 16.1\% | 9.7\% | 14.0\% | 15.8\% | 9.9\% | 14.0\% | 13.8\% |
| 19 | 7.84 | I would be wary of losing band traditions. | 64.0\% | 68.1\% | 66.9\% | 65.7\% | 69.0\% | 61.3\% | 70.3\% | 57.7\% | 66.0\% | 66.0\% |
| 20 | 8.78 | A teacher change would be very stressful for the program. | 50.2\% | 48.8\% | 52.3\% | 44.8\% | 51.3\% | 49.5\% | 54.8\% | $37.3 \%$ | 52.0\% | 49.5\% |
| 21 | 10.17 | Our band program would fall apart and become undisciplined. | 27.3\% | 26.0\% | 25.0\% | 30.8\% | 24.8\% | 25.8\% | 32.6\% | 12.7\% | 30.0\% | 26.7\% |
| 22 | 3.26 | There is always something new to learn from a different teacher. | $71.5 \%$ | 71.3\% | 72.1\% | 68.5\% | 75.2\% | 69.9\% | 66.3\% | 81.7\% | 71.0\% | 71.4\% |


| \# | Scale Value | Statement | Male | Female | Freshman | Sophomore | Junior | Senior | No <br> Turnover | $\begin{aligned} & \text { First } \\ & \text { Year } \end{aligned}$ | Second <br> Year | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 23 | 5.65 | A teacher change would not bother me. | 30.0\% | 16.9\% | 23.3\% | 16.1\% | 25.7\% | 33.3\% | 19.7\% | 31.7\% | 23.0\% | 23.6\% |
| 24 | 5.99 | There are both positive and negative feelings about my band teacher leaving. | 70.0\% | 65.4\% | 72.1\% | 66.4\% | 61.9\% | 68.8\% | 68.1\% | 69.7\% | 64.0\% | 67.8\% |
| 25 | 8.48 | I would be disappointed and worried about our band's future. | 44.9\% | 48.4\% | 47.1\% | 48.3\% | 48.7\% | 40.9\% | 52.3\% | 29.6\% | 55.0\% | 46.6\% |
| 26 | 9.91 | I would not be helpful to a new teacher, they can figure it out on their own. | 10.1\% | 6.7\% | 11.6\% | 9.1\% | 4.4\% | 6.5\% | 4.7\% | 7.7\% | 20.0\% | 8.4\% |
| 27 | 5.86 | A new teacher will create both good and bad memories. | 60.7\% | 62.2\% | 63.9\% | 64.3\% | 58.4\% | 55.9\% | 59.5\% | 64.8\% | 62,0\% | 61.4\% |
| 28 | 5.58 | I would expect some changes to the band program, but they should try and keep things the same. | 71.2\% | 71.3\% | 77.3\% | 68.5\% | 68.1\% | 67.7\% | 74.2\% | 71.1\% | 63.0\% | 71.2\% |
| 29 | 5.8 | Things will not change that much. | 14.2\% | 11.4\% | 13.4\% | 11.2\% | 13.3\% | 14.0\% | 10.0\% | 21.1\% | 9.0\% | 12.9\% |

In terms of gender, the percentage of agreement between males and females is rather close for 27 of the 29 statements as shown in Table 5. The greatest disparity occurs for statement 23 , "A teacher change would not bother me" (overall agreement = 23.6\%). Almost twice as many male students (30\%) agreed to this statement as female students (16.9\%), indicating that more females than males may be "bothered" by a teacher turnover. A disparity of 10 percentage points between males and females was found for statement 1, "I don't know if a teacher change would make things better or worse" (overall agreement $=55.1 \%$ ). More female students (60.2\%) than male students (50.2\%) agreed with this statement. This seems to indicate that female students are less certain about the impact of teacher turnover.

Table 6 shows statements extracted from Table 5 for which a disparity of 9.6 or more was found between percentages of agreement for two or more levels of the grade level variable. A total of 12 statements were identified. Six statements $(2,3,10,12,13$, and 15$)$ have scale values that tend toward the positive end of the attitude continuum, and six statements ( $1,6,14,23,24$, and 27) have scale values that tended toward the neutral position on the attitude continuum. For 11 of the 12 statements, the highest percentages of agreement are found either with the seniors $(2,3,6,10,15$, and 23$)$ or with the freshmen $(1,12$, 14,24 , and 27). For 11 of the 12 statements, the greatest difference between percentages of agreement is found between seniors and another grade level (1, 2, $3,6,10,12,14,15,23,24$, and 27). Taken together, these findings suggest that
seniors may have a different perspective than other students toward teacher turnover.

Table 6
Scale Values and Percentages Agreement of Statements with High Variability
within the Grade Level Variable

| \# | Scale <br> Value | Statement | Freshman | Sophomore | Junior | Senior |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 6.05 | I don't know if a teacher change would make things better or worse. | 62.2\% | 58.7\% | 50.4\% | 41.9\% |
| 2 | 2.84 | A new teacher might attract more students to join band. | 28.5\% | 25.2\% | 24.8\% | $34.4 \%$ |
| 3 | 4.76 | It would take a while, but I would get used to a new band teacher. | 74.4\% | 75.5\% | 65.5\% | 78.5\% |
| 6 | 6.77 | I would have to get used to a new teacher, new rules, and new traditions. | 76.7\% | 76.2\% | 68.1\% | 80.6\% |
| 10 | 3.98 | Although we were used to the old teacher, we could use some new changes. | 29.1\% | 33.6\% | 32.7\% | 38.7\% |
| 12 | 3.82 | Even though I would miss my teacher, I might like a new one as much or better. | 48.8\% | 46.2\% | 38.9\% | 40.9\% |
| 13 | 4.48 | Getting a new teacher would not be all that bad. | 40.1\% | 42.7\% | 29.2\% | 41.9\% |
| 14 | 7.32 | Change is sometimes bad. | 70.9\% | 67.8\% | 61.1\% | 59.1\% |
| 15 | 2.52 | I would make the best of a teacher change. | 67.4\% | 55.2\% | 69.0\% | 75.3\% |
| 23 | 5.65 | A teacher change would not bother me. | 23.3\% | 16.1\% | 25.7\% | 33.3\% |
| 24 | 5.99 | There are both positive and negative feelings about my band teacher leaving. | 72.1\% | 66.4\% | 61.9\% | 68.8\% |
| 27 | 5.86 | A new teacher will create both good and bad memories. | 63.9\% | 64.3\% | 58.4\% | 55.9\% |

Percentage of agreement scores by type of turnover experience were found to be statistically significant in the ANOVA table reported earlier. The
percentage of agreement was significantly different for the first year of a new teacher group than for either the no turnover group or the second year of a teacher turnover group. The first year of a new teacher group had either the highest or the lowest percentage of agreement for 26 of the 29 statements. Clearly, the attitudes of this group are different from the other two groups. In general, the first year of a new teacher group perceives the effort of their new teacher (statement 4), are not concerned about the program being ruined (statement 8), or loss of tradition (statement 19), indicate that they like their new teachers (statement 12), and are less nervous about the future (statement 9) than other groups. There may be various explanations for these findings. These data were collected in February when students were 6 to 7 months into the school year. Any apprehensions they may have had about the new teacher may have been allayed by this point in the year and students may be genuinely pleased with how things are going. Another possible explanation is that students who chose to leave the band because of the new teacher and may have had lower attitudes are not represented in this data set.

The relationship between the scale value of a statement and the percentage of agreement for each level of independent variable (as shown in Table 5) was investigated using Pearson product-moment correlation. A significant strong negative relationship was found between the scale value and percentage of agreement in first year of a teacher turnover group $r=-.62, n=29, p>.001$. Higher percentages of agreement were found with lower (positive) scale values, indicating that these students were agreeing more with positive statements toward teacher turnover. No other significant correlations were found.

## Part 2: Analysis of Likert-type and Open-ended Questions

To supplement the results found using the questions derived Thurstone method of equal-appearing intervals (statements $1-29$ above) ten additional statements were included in the survey. Students were asked to respond using the standard five-point Likert-type choices of Strongly Agree, Agree, Neither Agree or Disagree, Disagree, and Strongly Disagree. This part of the study appeared on the back page of the final survey instrument (Appendix E). Statements were selected for inclusion based solely on the researcher's interest in how students would respond. Answers were scored: Strongly Agree $=5$, Agree $=4$, Neither Agree or Disagree $=3$, Disagree $=2$, and Strongly Disagree $=1$. Table 7 shows each statement with the overall mean score and standard deviations.

Table 7
Mean Score for Likert-type Questions 1 - 10

| $\#$ | Statement | $M$ | $S D$ |
| :--- | :--- | :--- | :--- |
| 1 | If my current band teacher left, I would want to <br> stay in band no matter what. | 3.95 | 1.03 |
| 2 | I would feel betrayed if my current band teacher <br> left us to go to another high school. | 3.31 | 1.16 |
| 3 | I don't think the teacher makes any difference on <br> my choosing to participate in band. | 2.95 | 1.24 |
| 4 | I think it's a good idea to have multiple band <br> directors during my four years in high school. | 2.15 | 1.04 |
| 5 | I would quit band if my friends also quit band <br> because our teacher was leaving. | 2.43 | 1.10 |
| 6 | I would help a new teacher try to be more <br> successful in their first year. | 3.93 | .79 |
| 7 | I think the older students will have the most <br> problems (conflicts) with a new teacher. | 3.89 | .96 |
| 8 | There really wouldn't be that many positive things <br> about a teacher change at first, but we will get <br> over it. | 3.26 | .87 |
| 9 | A new teacher might make band more fun than it <br> is now. | 3.01 | .98 |
| 10 | I would prefer to have the same band teacher for <br> all four years of high school. | 4.37 | .86 |

Note: Strongly Agree =5, Agree $=4$, Neither Agree or Disagree $=3$, Disagree $=2$, and Strongly Disagree $=1$

A 2 X 4 X 3 MANOVA was planned to examine the effects of gender, grade level, and turnover experience as indicated by responses to 10 Likert-type statements. However, on examination of the data, it was determined that several
assumptions would be violated with the use of this analysis. For example, Box's text for equality of covariance matrices was violated, $F(1045,35117)=1.19, p<$ .001. This means that the levels of variables had unequal numbers for comparison. Levene's Test of equal variances was also found to be significant for three of the 10 questions, meaning that equal variances could not be assumed. Although multivariate statistics are widely used to analyze Likert-type response data, it was determined that there were too many problems to overcome for a MANOVA to be used in the current study.

Responses to the 10 Likert-type questions were then summed to create one attitude score for each participant. A three-way ( 2 X 4 X 3) ANOVA was then conducted to evaluate the effects of gender, grade level, and turnover experience on summed attitude scores. No significant difference was found for any of the main effect variables of gender, $F(1,491)=.36, p=.55$, partial $\eta^{2}=.001$, grade level, $F(3,491)=.05, p=.99$, partial $\eta^{2}=<.001$, or turnover experience, $F(2$, 491) $=.65, p=.52$, partial $\eta^{2}=.003$. No significance was found for any of the interactions between gender and grade level, $F(3,491)=.59, p=.62$, partial $\eta^{2}=$ .004 , gender and turnover experience, $F(2,491)=.17, p=.84$, partial $\eta^{2}=.001$, grade level and turnover experience, $F(6,491)=2.01, p=.06$, partial $\eta^{2}=.02$, or gender, grade level, and turnover experience, $F(6,491)=1.19, p=.31$, partial $\eta^{2}$ $=.01$. Table 8 shows the ANOVA summary table for these results, and Table 9 shows the means and standard deviations for each statement by levels of each independent variable.

Table 8
ANOVA Summary Table for Analysis of Liker-type Questions by Gender,
Grade Level, and Turnover Experience

| Source | SS | $d f$ | $M S$ | $F$ | $p$ |
| :--- | ---: | :--- | :--- | :--- | :--- |
| Gender (G) | 3.75 | 1 | 3.75 | .36 | .55 |
| Grade Level (GL) | 1.57 | 3 | .52 | .05 | .99 |
| Turnover Experience (TE) | 13.47 | 2 | 6.74 | .65 | .52 |
| G X GL | 18.35 | 3 | 6.12 | .59 | .62 |
| G X TE | 3.50 | 2 | 1.75 | .17 | .84 |
| GL X TE | 124.40 | 6 | 20.73 | 2.01 | .06 |
| G X GL X TE | 73.47 | 6 | 12.25 | 1.19 | .31 |
| Error | 5059.52 | 491 | 10.31 |  |  |

Table 9

| \# | Statement | Males | Females | Freshmen | Sophomores | Juniors | Seniors | No Turnover | $I^{s t}$ Year Turnover | $2^{\text {nd }}$ Year Turnover | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | If my current band teacher left, I would want to stay in band no matter what. | 3.99 | 3.91 | 3.99 | 3.86 | 3.88 | 4.09 | 3.81 | 4.12 | 4.09 | 3.95 |
| 2 | I would feel betrayed if my current band teacher left us to go to another high school. | 3.21 | 3.30 | 3.32 | 3.39 | 3.35 | 3.14 | 3.31 | 3.09 | 3.62 | 3.31 |
| 3 | I don't think the teacher makes any difference on my choosing to participate in band. | 2.97 | 2.96 | 2.99 | 2.90 | 3.01 | 2.88 | 2.86 | 3.10 | 2.98 | 2.95 |
| 4 | I think it's a good idea to have multiple band directors during my four years in high school. | 2.25 | 2.06 | 2.12 | 2.17 | 2.09 | 2.27 | 2.08 | 2.32 | 2.12 | 2.15 |
| 5 | I would quit band if my friends also quit band because our teacher was leaving. | 2.37 | 2.49 | 2.43 | 2.57 | 2.38 | 2.25 | 2.45 | 2.56 | 2.18 | 2.43 |


| \# | Statement | Males | Females | Freshmen | Sophomores | Juniors | Seniors | No Turnover | ${ }^{s t}$ Year Turnover | $2^{\text {nd }} \text { Year }$ <br> Turnover | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 6 | I would help a new teacher try to be more successful in their first year. | 3.93 | 4.13 | 3.80 | 3.88 | 4.05 | 4.10 | 3.93 | 4.02 | 3.82 | 3.93 |
| 7 | I think the older students will have the most problems (conflicts) with a new teacher. | 3.95 | 4.04 | 3.87 | 3.74 | 4.04 | 4.00 | 3.94 | 3.86 | 3.81 | 3.89 |
| 8 | There really wouldn't be that many positive things about a teacher change at first, but we will get over it. | 3.27 | 3.25 | 3.23 | 3.35 | 3.15 | 3.31 | 3.37 | 3.07 | 3.22 | 3.26 |
| 9 | A new teacher might make band more fun than it is now. | 3.07 | 2.94 | 3.00 | 2.96 | 2.96 | 3.15 | 2.87 | 3.31 | 2.96 | 3.01 |
| 10 | I would prefer to have the same band teacher for all four years of high school. | 4.32 | 4.44 | 4.45 | 4.36 | 4.34 | 4.31 | 4.52 | 4.04 | 4.44 | 4.37 |

Responses to Likert-type questions were scored from Strongly Agree (5), to Strongly Disagree (1). The three statements with the highest means were:

- "I would prefer to have the same band teacher for all four years of high school ( $M=4.37$ );
- "If my current band teacher left, I would want to stay in band no matter what," $(M=3.95)$; and
- "I would help a new teacher try to be more successful in their first year" $(M=3.93)$.

Taken together, these statements indicate that although students would like to have the same band teacher for their entire high school experience, they will stay in band and try and help a new teacher if a turnover occurs.

The statements with the lowest means were:

- "I think it's a good idea to have multiple band directors during my four years in high school" $(M=2.15)$;
- "I would quit band if my friends also quit band because our teacher was leaving" ( $M=2.43$ ); and
- "I don't think the teacher makes any difference on my choosing to participate in band" $(M=2.95)$.

Taken together, these statements also indicate that they would prefer to have the same band teacher for their entire high school experience, but that if teacher turnover occurs they are not likely to leave band.

A Pearson product-moment correlation was utilized to find the relationship between the students' responses to the 10 Likert-type questions.

Many significant relationships were found between these statements. The largest significant negative relationships were between the statements "I would prefer to have the same band teacher for all four years of high school," and "I think it's a good idea to have multiple band directors during my four years in high school," $r=-.49, p<.001$, and between "I would quit band if my friends also quit band because our teacher was leaving," and "If my current band teacher left, I would want to stay in band no matter what," $r=-.37, p<.001$. The largest significant positive relationships were between the statements "I don't think the teacher makes any difference on my choosing to participate in band," and "If my current band teacher left, I would want to stay in band no matter what," $r=.34, p<.001$, and between "I would prefer to have the same band teacher for all four years of high school," and "I would feel betrayed if my current band teacher left us to go to another high school," $r=.30, p<.001$. Results of the correlation coefficients for relations between the 10 Likert-type questions were reported in Table 10.

> | Table 10 |
| :--- |
| Correlations Between Likert-tvpe Responses | $\begin{array}{ll}\text { Satement }\end{array}$

At the end of the survey, students were asked if they had anything else they wanted to say about how they would feel toward a teacher turnover by writing responses to an open-ended question. A total of 84 students (16\%) submitted responses. The responses were sorted into three groups representing statements that were positive, negative, or neutral toward band teacher turnover. Negative statements prevailed, with $58.3 \%(n=49)$. Neutral statements represented $25.0 \%(n=21)$, and positive statements represented $16.7 \%(n=14)$. A list of the statements can be found in Appendix F.

In summary, 521 high school band students completed a two part survey. In the first part, students were asked to respond with the dichotomous choices of "agree" or "disagree" to the 29 statements selected from the Thurstone method of equal-appearing intervals. Responses generated an attitude score for each participant. Analysis of the data indicated that the overall attitude score was in the neutral category, 6.21. In fact, scores for each of the levels of the independent variables of gender, grade level, and turnover experience were also neutral. Only one variable, teacher turnover experience, was found to be significant. Students in the first year of a teacher turnover had slightly more positive attitudes toward teacher turnover than students who have not experienced a teacher turnover and students in a second year after a teacher turnover.

In the second part, students were asked to respond to ten additional statements with the standard five-point Likert-type choices of Strongly Agree, Agree, Neither Agree or Disagree, Disagree, and Strongly Disagree. Results were
summed and analyzed. No significant differences were found between any of the variables of gender, grade level, and teacher turnover experience.

## Chapter 5: Discussion

The purposes of this study were (a) to develop a reliable and valid measure of secondary student attitudes toward band teacher turnover using the Thurstone (1928) equal-appearing interval scale as a model, and (b) to administer this measurement tool to determine attitudes of high school band students toward teacher turnover. This chapter presents discussions of the instrument developed in this study and results of the final survey that was completed by 521 high school band students.

## The Thurstone Method of Equal-Appearing Intervals

The first purpose of this study was to develop a reliable and valid measure of secondary student attitudes toward band teacher turnover using the Thurstone (1928) equal-appearing interval scale as a model. This procedure included collecting statements about an imagined teacher turnover from students in the population $(N=216)$ and having student judges $(N=95)$ sort the statements into eleven categories based on how positive, neutral, or negative, each statement was perceived. The judging results were then analyzed, and a scale value for each statement was calculated. Then, based on the continuum of scale values, 29 statements were selected for inclusion in the final survey, which was completed by students ( $N=521$ ). Consistent with the Thurstone equal-appearing intervals method, the participants responded to the 29 statements with a dichotomous choice of "agree" or "disagree." The scale values of each statement a student marked "agree" were summed and divided by the number of times the student marked "agree" to calculate an individual mean attitude score. Group attitude
scores were then calculated. The reliability of the attitude instrument was tested using Cronbach's Alpha ( $\alpha$ ). A coefficient of .54 was achieved. This is lower than the .7 recommended for attitude research (Cutietta, 1992). Lower coefficients, although tolerated, can affect the confidence with which the researcher can make decisions based on the measurement results.

For the purpose of this study, the Thurstone method of equal-appearing intervals was not completely successful due to the low reliability. Any test construction goes through a process of many revisions. In the future, the low reliability found for this measure may be rectified through a more rigorous pilot testing and revision process. In this study, 29 items were selected from a pool of 93 statements. Item analysis may point to a different combination of items that may yield a higher reliability. Another possibility is that the imagined teacher turnover stimulus was not strong enough to encourage students to think about band teacher turnovers until they are faced with one. A lack of consistency in their attitudes may be reflected by the low reliability scores. It is also possible that the method, which was designed and tested by Thurstone and others using college students and adults as participants, may not be as effective with adolescents.

Several challenges arose during the data collection process. Gaining access to high school students was difficult, sometimes even after district and principal approvals were granted. For example, in one school the director was not able to take class time to complete the survey December. As a result, only 216 students representing 7 of the 12 schools chosen for Phase One participated. To
increase participation to 100 student judges for Phase Two, two more schools were added in January. At that point, one school declined participation for the remainder of the study. After visiting all of the eight schools, 95 student judges agreed to participate, which was still an acceptable number according to Edwards (1957), Ferguson (1939), and Trochim (2006). For Phase Three, two more schools were invited to participate in the final survey in February. These schools were added to equalize the number of students in the teacher turnover experience variable. Two schools did not return their surveys. A total of 521 surveys were returned from 8 schools. Some students participated in all phases, whereas some did not, which may have affected the reliability of the instrument as some students may have gained familiarity with some of the statements.

During Phase Two of the study, I observed what I thought to be misjudgments of statements by the high school students. Some strong negative or positive statements had large variances, and did not qualify for the final survey. For example, the statement "I would be more upset if my current band teacher left us to go to another high school" may have been interpreted as both positive (I really liked my teacher) and negative (the thought of my teacher leaving makes me upset). Further, having five students sort the statements in one room simultaneously at different stations may have contributed to errors in judgment or lack of independence in judgments. For example, some students, while judging, would laugh at some of the statements that they were being asked to sort. This tended to occur in schools where students were in the first year of a new teacher.

They were amused at the statements about the band program falling apart, becoming undisciplined, or suffering in quality.

The population for this study includes all Arizona high school band students. I made the decision to include all students regardless of teacher turnover experience, in all phases of the instrument construction process. For example, had the first two phases only included the no turnover group as a baseline, the other two groups (first year and second year after a teacher turnover) may have reported attitude scores with more variation.

## Results of the Attitude Survey

The second purpose of this study was to determine attitudes of high school band students toward teacher turnover. A total of 521 students completed an attitude inventory comprised of 29 statements derived from the Thurstone method described above, plus an additional 10 Likert-type statements, and one additional open-ended question.

The use of Thurstone's method of equal-appearing intervals yielded several interesting results. Mean attitude scores derived from the Thurstone method were in the neutral range of the attitude continuum when examined by the whole group and by the independent variables of gender, grade level, and turnover experience. One significant difference between means was found for the independent variable of teacher turnover experience. Specifically, the attitudes of students in the first year of a new teacher group were significantly different and slightly more positive than the no turnover and second year of a teacher turnover groups.

In Table 6 (of Chapter 4), statements with high variability within the grade level variable were extracted. Seniors tended to have the most variability when compared to other grade levels. These findings suggest that seniors may have a different perspective than other students toward teacher turnover. An explanation could be that senior students will not be at the school in the year following a teacher turnover. Some seniors commented that coming back to visit would not be as fun without their previous teacher there.

The slightly positive attitude score for students who experienced a teacher turnover do not seem to last past that first year. By the second year, attitudes toward teacher turnover seem to return to same levels as the no turnover group. Maybe unfamiliarity heightens negative affective responses to teacher turnover. Students may also have positive feelings knowing that their program survived a teacher change. There is also the possibility that scores for the first year of a new teacher group are slightly higher because the students that took the survey are only those that remained in band after the teacher transition.

Two of the statements with the highest percentage of student agreement were "Nobody knows what to expect from a new teacher," and "A new teacher will have their own ideas, and may not listen to our traditions." These statements reflect anxiety in the students toward teacher turnover. Incoming teachers may want to focus on reducing the amount of student anxiety by reducing the amount of "unknowns" when they arrive. Meeting with students before the school year begins is encouraged to decrease a degree of uncertainty. Students may also want
to express their views as to what they value in their band programs to the new teacher.

The second part of the instrument included 10 additional statements to which students responded using a standard five-point Likert-type scale (Strongly Agree, Agree, Neither Agree or Disagree, Disagree, and Strongly Disagree). Statements were included based on researcher interest. One open-ended question invited students to provide more comments about how they would feel during a teacher turnover.

Teachers should be encouraged by the results of this survey. The highest scoring Likert-type statement was "I would prefer to have the same band teacher for all four years of high school." Negatively correlated with this statement ( $r=-$ .49) was the statement "I think it's a good idea to have multiple band directors during my four years in high school." Students consistently say they would prefer to have the same band teacher throughout their high school careers. Also negatively correlated $(r=-.37)$ were the two statements "If my current band teacher left, I would stay in band no matter what," and "I would quit band if my friends also quit band because our teacher was leaving." When viewed along with the low $11.5 \%$ of agreement with the statement, "If my current teacher left, I would quit band," low levels of students willing to quit band solely because of the teacher was consistent with findings by Kloss (2009) and Gouzouasis, Henrey, and Belliveau (2008).

Throughout this study, opinions and statements generated by the students were very interesting to read. Some of them were very insightful, while others
were very reactionary to the imagined teacher change. Some of the students commented that band programs fail because of the students, not the teacher. In general, students seemed to realize that a teacher change is a temporary obstacle, and band will continue to exist. Exceptions were found in statements collected from students in two rural schools. Each school had a teacher quit in years prior to this study. In both cases, a replacement was not found until after a semester had passed. These students were worried that teacher turnovers could mean no band at their school.

Only $16 \%$ of students offered a last thought about teacher turnover by responding to the open-ended question. Their responses may have been prompted by having read the statements on the previous sections of the survey. A majority of the students' comments were negative towards teacher turnover suggesting that it is difficult for some students to envision a positive outcome from a teacher turnover. Perhaps the students who are worried about their teacher leaving were more inclined to articulate their opinions. An example of a negative comment is, "I would feel worried because I know we would lose many players and the new band would change things that don't need to be changed." A more positive statement included, "After my freshman year, our band got a new director. At first I didn't know what to think, but it has been a change for the better because we have been a lot more successful."

## Implications and Future Research

The data collection for this study took place between December 2010 and February 2011. Results may have been different at a different point in the school
year, depending on how much time the students spend with their new band teacher. For example, had I collected this data at the beginning of the school year, students may not have been as positive. Longitudinal studies of attitudes and attitude changes may be an interesting future study.

It is also possible that attitudes toward teacher turnover are more complicated than can be described using the Thurstone method, or that more variables exist than were covered in this study. Not included in this study were schools with multiple band teachers who team teach in the same program. Students' attitudes toward a teacher turnover may change if one teacher is replaced and one stays constant. Also, the various types of teacher turnover in terms of teacher expertise and related factors were not examined in this study, such as: (1) a veteran teacher being replaced by a novice teacher; (2) a novice teacher being replaced by a veteran teacher; (3) a retiring teacher being replaced; or (4) attitudes toward a positively or negatively viewed teacher being replaced. Attitudes toward a student's current teacher may also shape attitudes toward a teacher turnover. Students' attitudes toward multiple teacher turnovers were also not researched in this study, and may be appropriate for future research. A multiple case study approach may shed additional light on how students view and respond to different types of teacher turnover.

Losing student participation after a teacher transition may still be an issue worth exploring further as $11.5 \%$ of students in this study agreed with the statement, "If my current teacher left, I would quit band." This is consistent with Kloss (2009), who found that student participation in Arizona marching bands
decreased by $8.8 \%$ after each teacher turnover. Based on the results of this study, future research on the amount of impact the band teacher has on student retention and attrition in music programs is warranted. Previous studies by Gouzouasis, Henrey, and Belliveau (2008) and Kloss (2010) suggest there is some connection between the band teacher and student retention in band programs, but more work in this area is needed.

Kloss (2010) found that the way a teacher leaves a program could also have a positive or negative effect on student attitudes the following year. Band teachers have been known to comment on how their former programs fell apart after they left. Could it be that, instead of the view that they were the only ones capable of maintaining their program, it may be more likely that the way they left a program caused the attitudes of students to change? Longitudinal studies may be more appropriate to track changes in attitudes.

In summary, high school band student attitudes toward teacher turnover are very complex. All of the mean scores for each variable were in the neutral range of attitudes. In this study, student attitudes slightly became more positive after students had experienced a teacher turnover, but another year later, the attitudes had reverted back to the pre-turnover level.

Students may be upset, nervous, or concerned for the future of their band program approaching a teacher transition. The data from this study suggest that this may be a short term attitude. Interpretations of results indicate that students' attitudes show an inclination toward staying in band after a teacher change.

Students claim to want stability in their band teachers, but will tend to stay in the
program even if a teacher change occurs. Students get anxious not knowing how their band program will continue with a new teacher. Teachers leaving may be able to help a transition by introducing the new teacher to the band students to reduce the anxiety of the unknown future.

## References

Albert, D. J. (2006). Socioeconomic status and instrumental music: What does research say about the relationship and its implications? Update:
Applications of Research in Music Education, 25, 39-45.
Alliance for Excellent Education. (2005). Teacher attrition: A costly loss to the nation and to the states. Retrieved August 29, 2010, from http://www.all4ed.org/files/archive/publications/TeacherAttrition.pdf.

Alliance for Excellent Education. (2008). What keeps good teachers in the classroom? Understanding and reducing teacher turnover. Retrieved January 13, 2010, from http://www.all4ed.org/files/TeachTurn.pdf.

Bechen, E. F. (2000). Sources of stress as perceived by preservice and inservice Iowa music educators. (Doctoral Dissertation). Retrieved from ProQuest Dissertations. (304602925)

Blunt, A. (1983). Development of a thurstone scale for measuring attitudes toward adult education. Adult Education Quarterly, 34(1), 16-28.

Boe, E. E., Cook, L. H., \& Sunderland, R. J. (2008). Teacher turnover: Examining exit attrition, teaching area transfer, and school migration. Exceptional Children, 75(1), 7-31.

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

Breckler, S. J. (1984). Empirical validation of affect, behavior, and cognition as distinct components of attitude. Journal of Personality and Social Psychology, 47(6), 1191-1205.

Chalmers, B. A. (1976). The development of a measure of attitude toward instrumental music style. Journal of Research in Music Education, 26(2), 90-96.

Colwell, R. (Ed.). (2006). MENC handbook of research methodologies. New York, NY: Oxford University Press.

Cutietta, R. A. (1992). The measurement of attitudes and preferences in music education. In R. Colwell (Ed.), Handbook of research in music teaching and learning (pp. 295-309). New York, NY: Schirmer Books.

Darling-Hammond, L., \& Sykes, G. (2003). Wanted: A national teacher supply policy for education: The right way to meet the "highly qualified teacher" challenge. Education Policy Analysis Archives, 11(33).

Duke, R. A., \& Henninger, J. C. (1998). Effects of verbal corrections on student attitude and performance. Journal of Research in Music Education, 46(4), 482-485.

Edwards, A. L. (1957). Techniques of attitude scale construction. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Eiser, J. R. (1987). The expression of attitude. New York, NY: Springer-Verlag.
Excel (2007) [Computer software]. Redmond, WA: Microsoft.
Falch, T., \& Ronning, M. (2005). The influence of student achievement on teacher turnover. CESifo Working Paper No. 1469. Retrieved on September 10, 2010, from http://www.cesifogroup.de/DocCIDL/cesifo1_wp1469.pdf

Ferguson, L. W. (1939). The requirements of an adequate attitude scale. Psychological Bulletin, 36(8), 665-673.

Fredrickson, W. E. (2007). Music majors' attitudes toward private lesson teaching after graduation: A replication and extension. Journal of Research in Music Education, 55(4), 326-343.

Gordon, D. (2000). Sources of Stress for the public school music teacher: Four case studies. Contributions to Music Education, 27(1), 27-40.

Gouzouasis, P., Henrey, J., \& Belliveau, G. (2008). Turning points: A transitional story of grade seven music students' participation in high school band programmes. Music Education Research, 10(1), 75-90.

Guarino, C. M., Santibañez, L., \& Daley, G. A. (2006). Teacher recruitment and retention: A review of recent empirical literature. Review of Educational Research, 76, 173-208.

Guin, K. (2004). Chronic teacher turnover in urban elementary schools. Education Policy Archives, 12, 1-25. Retrieved January 13, 2010, from http://epaa.asu.edu/epaa/v12n42/.

Guttman, L. (1950). The basis for scalogram analysis. In Stouffer et al. Measurement and Prediction. The American Soldier Vol. IV. New York: Wiley

Hamann, D. L., Daugherty, E., \& Mills, C. R. (1987). An investigation of burnout assessment and potential job related variables among public school music educators. Psychology of Music, 15, 128-140.

Hancock, C. B. (2008). Music teachers at risk for attrition and migration: An analysis of the 1999-2000 schools and staffing survey. Journal of Research in Music Education, 56(2), 130-144.

Hancock, C. B. (2009). National estimates of retention, migration, and attrition: A multiyear comparison of music and non-music teachers. Journal of Research in Music Education, 57(2), 92-107.

Haycock, K. (1998). Good teaching matters: How well-qualified teachers can close the gap. Washington, DC: The Education Trust. Retrieved August 19, 2010 from
http://www.edtrust.org/sites/edtrust.org/files/publications/files/k16 summer9 8.pdf.

Hewett, M. P. (2001). The effects of modeling, self-evaluation, and self-listening on junior high instrumentalists' music performance and practice attitude. Journal of Research in Music Education, 49(4), 307-322.

Humphreys, J. T., \& May, V. M., \& Nelson, D. J. (1992). Research on music ensembles. In R. Colwell (Ed.), Handbook of research in music teaching and learning (pp. 651-668). New York, NY: Schirmer Books.

Hill, W. L. (2003). The teacher shortage and policy. Music Educators Journal, 89(6), 6-7.

Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. American Educational Research Journal, 38(3), 499-534.

Ingersoll, R. M. (2002). The teacher shortage: A case of wrong diagnosis and wrong prescription. NASSP Bulletin, 86, 16-31

Ingersoll, R. M. (2003). Is there really a teaching shortage? The Consortium for Policy Research in Education. Retrieved January 13, 2010, from http://depts.washington.edu/ctpmail/PDFs/Shortage-RI-09-2003.pdf

Keigher, A. (2010). Teacher attrition and mobility: Results from the 2008-09 teacher follow-up survey (NCES 2010-353). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved August 29, 2010 from http://nces.ed.gov/pubsearch.

Kloss, T. (2009). Band director turnover and its relationship to marching band participation. Poster Presented at the Society for Music Teacher Education Symposium, Greensboro, SC, September 11.

Kloss, T. (2010). High school band students' perceptions of teacher turnover. Paper presented at the Herberger College Artswork Symposium, Tempe, AZ, April 9.

Kuhn, T. L. (1980). Instrumentation for the measurement of music attitudes. Contributions to Music Education, 8, 2-38.

Larsen, D. D. (2010). The effects of chamber music experience on music performance achievement, motivation and attitudes among high school band students. (Doctoral Dissertation). Arizona State University: Tempe, AZ.

Lankford, H., Loeb, S., \& Wyckoff, J. (2002). Teacher sorting and the plight of urban schools: A descriptive analysis. Educational Evaluation and Policy Analysis, 24(1), 37-62.

Likert, R. (1932). A technique for the measurement of attitudes. Archives of Psychology, 22(140), 5-55.

Likert, R., Murphy, G., \& Roslow, S. (1934). A simple and reliable method of scoring the thurstone attitude scales. Journal of Social Psychology, 5, 228-238.

Lindeman, C. A. (2004). Ten strategies for higher education and the $\mathrm{k}-12$ music teacher shortage. Music Educators Journal, 90(3), 66-67.

Luekins, M. T., Lyter, D. M., \& Fox, E. E. (2004). Teacher attrition and mobility: Results from the teacher follow-up survey, 2000-2001. (NCES 2004-301) U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved August 29, 2010 from http://nces.ed.gov/pubsearch.

Madsen, C. K., \& Hancock C. B. (2002). Support for music education: A case study of issues concerning teacher retention and attrition. Journal of Research in Music Education, 50(1), 6-19.

McCaffrey, D. F., Koretz, D. M, Lockwood, J. R., \& Hamilton, L. S. (2003). Evaluating value-added models for teacher accountability. Santa Monica: RAND, MG-158-EDU.

Morrison, S. J., Montemayor, M., \& Wiltshire, E. S. (2004). The effect of a recorded model on band students' performance self-evaluation, achievement, and attitude. Journal of Research in Music Education, 52(2), 116-129.

Murnane R. J., \& Steele, J. L. (2007). What is the problem? The challenge of providing effective teachers for all children. The Future of Children, 17, 15-43.

National Center for Education Statistics. (2005). The condition of education 2005. Education Statistics Quarterly, 7. Retrieved January 13, 2010, from http://nces.ed.gov/programs/quarterly/vol_7/1_2/9_1.asp .

National Commission on Teaching and America's Future. (2003). No dream denied: A pledge to America's children. Retrieved on January 13, 2010, from http://www.nctaf.org/resources/research and reports/nctaf research repor ts/index.htm .

National Commission on Teaching and America's Future (2007). Policy brief: The high cost of teacher attrition. Retrieved January 13, 2010, from http://www.nctaf.org/resources/research_and_reports/nctaf_research_repor ts/index.htm .

Nimmo, D. J. (1986). Factors of attrition among high school band directors. (Doctoral Dissertation). Arizona State University: Tempe, AZ.

Nolin, W.H. (1973). Attitudinal growth patterns toward elementary school music experiences. Journal of Research in Music Education, 21, 124-134.

Papinchak, A. E. (1992). The identification of factors that influence the retention of middle school string students in the Commonwealth of Pennsylvania. (Doctoral Dissertation). Retrieved from ProQuest Dissertations. (9236884)

Rosenberg, M. J., \& Hovland, C. I. (1960). Cognitive, affective, and behavioral components of attitudes. In M. J. Rosenberg, C. I. Hovland, W. J. Beguire, R. P. Abelson, \& J. W. Brehm (Eds.), Attitude organization and change: An analysis of consistency among attitude components (pp. 1-14). New Haven, CT: Yale University Press.

Rainey, V. J. (2002). The development of the "Rainey musical attitude scale", using the Thurstone scale as a model, to measure attitudes of music educators and principals toward the value of music in the north carolina public school curriculum (Doctoral Dissertation). Retrieved from ProQuest Dissertations. (AAT 3049176)

Rivkin, S. G., Hanushek, E.A., \& Kain, J. F. (2000). Teachers, schools, and academic achievement. Cambridge, MA: National Bureau of Economic Research, NBER Working Paper \# W6691.

Roberts, J. K. (1998). Thurstone's method of equal-appearing intervals in measuring attitudes: An old method that is not forgotten. Report: ED426085.15pp.Nov 1998, Retrieved from http://search.proquest.com/docview/62481964?accountid=4485.

Rust, J., \& Golombok, S. (2009). Modern psychometrics. New York, NY: Routledge.

Sandene, B. A. (1997). An investigation of variables related to student motivation in instrumental music. (Doctoral Dissertation). Retrieved from ProQuest Dissertations. (AAT 9811178)

Sanders, W. L., \& Rivers, J. C. (1996). Cumulative and residual effects of teachers on future student academic achievement. Knoxville, TN: University of Tennessee Value-Added Research Center. Retrieved January 13, 2010, from http://www.mccsc.edu/~curriculum/cumulative\ and\ residual\ ef fects $\% 20 \mathrm{of} \% 20$ teachers.pdf.

Scheib, J. W. (2003). Role stress in the professional life of the school music teacher: A collective case study. Journal of Research in Music Education, 51(2), 124-136.

Scheib, J. W. (2004). Why band directors leave: From the mouths of maestros. Music Educators Journal, 91(1), 53-57.

Scheib, J. W. (2006). Tension in the life of the school music teacher: A conflict of ideologies. Update: Applications of Research in Music Education, 24, 5-13.

Sichivitsa, V. O. (2007). The influences of parents, teachers, and peers and other factors on students' motivation in music. Research Studies in Music Education, 29, 55-68.

Shaw, C. N., \& Tomcala, M. (1976). Music attitude scale for use with upper elementary school children. Journal of Research in Music Education, 24, 73-80.

Solly, B. J. (1986). A study of attrition from the instrumental music program in moving between grade levels in Cherry Hill, New Jersey. (Doctoral Dissertation). Retrieved from ProQuest Dissertations. (AAT 8627515)

Terry, L.A., \& Kritsonis, W. W. (2008). A national issue: Whether the teacher turnover effects students' academic performance? National Journal for Publishing and Mentoring Doctoral Student Research, 5, 1-5.

Thorndike, R. M. (1997). Measurement and evaluation in psychology and education. Upper Saddle River, NJ: Prentice-Hall, Inc.

Thurstone, L. L. (1927). A law of comparative judgment. Psychological Review, 34, 273-286.

Thurstone, L. L. (1928). Attitudes can be measured. The American Journal of Sociology, 33(4), 529-554.

Thurstone, L. L., \& Chave, E. J. (1929). The measurement of attitude. Chicago, IL: University of Chicago Press.

Trochim, W. M. The Research Methods Knowledge Base, 2nd Edition. Internet WWW page, at URL: [http://www.socialresearchmethods.net/kb/](http://www.socialresearchmethods.net/kb/) (version current as of 2006). Retrieved August 30, 2010.

Tuttle, H. S. (1940). Selective application of the Thurstone test. The Journal of Educational Reseaerch, 33(9), 705-709

Villar, A., \& Strong, M. (2007). Is mentoring worth the money? A benefit-cost analysis and five-year rate of return of a comprehensive mentoring program for beginning teachers. ERS Spectrum Journal of Research and Information, 25(3), 1-17. Retrieved on August 30, 2010 from http://www.newteachercenter.org/pdfs/Spectrum Villar-Strong.pdf

Zdzinski, S. F. (1996). Parental involvement, selected student attributes and learning outcomes in instrumental music. Journal of Research in Music Education, 44(1), 34-48.

Zorn, J. D. (1973). Effectiveness of Chamber Music Ensemble Experience. Journal of Research in Music Education, 21(1), 40-47.

## APPENDIX A

PHASE ONE STATEMENT COLLECTION SURVEY

# HIGH SCHOOL BAND STUDENTS’ ATTITUDES TOWARD TEACHER TURNOVER 

A Research Study by Thomas E. Kloss<br>Graduate Student, Arizona State University

- Thank you for choosing to participate in my study. Your school was randomly selected from all of the high school band programs in Arizona.
- I am currently collecting opinions from high school band students about how they would feel if they found out their band teacher was leaving. These statements will be used to generate a final survey.
- On the back of this paper, I am asking for you to think of positive, negative, and neutral opinions you (or someone else) might have in terms of a hypothetical teacher change.

For example, if I asked for your opinion toward ICE CREAM, here are three possible responses:

## POSITIVE: Ice cream is the best dessert. <br> NEUTRAL: Sometimes I eat ice cream, sometimes I eat cake. NEGATIVE: I can't stand ice cream.

- Please do not put your name, your school's name, or your teacher's name anywhere on this survey. Your responses are completely anonymous.

You may also choose not to answer any of these questions.

Thank you for your time,
Thomas Kloss
Arizona State University

## Imagine that you just found out that your band teacher is leaving at the end of the school year.

What are two possible POSITIVE opinions about your teacher leaving, two possible NEGATIVE opinions about your teacher leaving, and two NEUTRAL opinions that you could have when hearing this news.

| POSITIVE |
| :--- |
| POSITIVE |
| NEUTRAL |
| NEUTRAL |
| NEGATIVE |
| NEGATIVE |

Is there anything else you would want me to know about how you would feel if your band teacher left?

I am: (Please circle) Male Female
I am: (Please circle) Freshman Sophomore Junior Senior
I play: (circle one) Woodwind Brass Percussion Other/Auxiliary

## APPENDIX B

PHASE ONE STATEMENTS WITH FREQUENCY AND TOPIC CLASSIFICATION
\# Statement $\quad f$ Topic Category
1 A new teacher will increase what can be accomplished in band.
2 A new teacher will NOT increase what can be accomplished in band.
3 I don't feel that I've accomplished much with my current band teacher.
4 I feel happy of what I've accomplished with my current band teacher.
5 I feel proud of what I've accomplished with my current band teacher.
6 A new teacher might attract more students to join band.
7 I think the juniors wouldn't stay for their senior year if the teacher left.
8 I would not join band without my current teacher.
9 I would quit band before meeting the new teacher.
10 I would quit band if the new teacher did not comply with our band's previous standards and traditions.
11 I would stay in band, no matter who is
ATTRITION teaching it, because I mostly love being with my friends.
12 I would stay in band, no matter who is teaching it, because I mostly love going on trips to events, football games, and on the spring trip.
13 I would stay in band, no matter who is teaching it, because I mostly love making music.
14 If my current band teacher left, I would give the new person a chance, but I'll probably choose to stay in band
15 If my current band teacher left, I would give the new person a chance, but I'll probably quit before the end of the year.
16 If my current band teacher left, I would quit band.
17 If my current band teacher left, I would stay in band no matter what.
18 If our teacher leaves, I will take another elective class.
19 More people may leave or join band.
ATTRITION
ATTRITION

ATTRITION

| \# | Statement | $f$ Topic Category |
| :---: | :---: | :---: |
| 20 | People might drop out of band if our teacher changed. | ATTRITION |
| 21 | Some students may quit because of a new person. | ATTRITION |
| 22 | Students may leave if our current teacher leaves. | ATTRITION |
| 23 | Students that quit because of a teacher change negatively affects the entire program. | ATTRITION |
| 24 | The teacher leaving will weed out the students who think band is a joke | ATTRITION |
| 25 | Without a band teacher, I would have one less thing to help me get a scholarship. | ATTRITION |
| 26 | A new band teacher means much of the program will change. | CHANGE |
| 27 | A new band teacher means some of the program will change. | CHANGE |
| 28 | A new band teacher means the entire program will change. | CHANGE |
| 29 | A new band teacher will not change the program. | CHANGE |
| 30 | A new perspective from fresh eyes offers a broader understanding of music. | CHANGE |
| 31 | A new start isn't a good thing for a band. It will feel like we are learning all over again. | CHANGE |
| 32 | A new teacher may bring new ideas. | CHANGE |
| 33 | A new teacher may teach harder or easier music. | CHANGE |
| 34 | A new teacher means we would have to start over again. | CHANGE |
| 35 | A new teacher might be better for the band | CHANGE |
| 36 | A new teacher will create good and bad memories. | CHANGE |
| 37 | A new teacher will have their own ideas, and may not listen to our traditions. | CHANGE |
| 38 | A new teacher would change our band routine. | CHANGE |
| 39 | A new teacher would not affect the freshman class. | CHANGE |
| 40 | A teacher change may be better, or worse. | CHANGE |
| 41 | A teacher change would test the real team players in the band. | CHANGE |


| \# | Statement | $f$ | Topic Category |
| :---: | :---: | :---: | :---: |
| 42 | A teacher change wouldn't affect me. |  | CHANGE |
| 43 | Although we were used to the old teacher, we could use some new changes. |  | CHANGE |
| 44 | As a graduating senior, a teacher change will not affect me. |  | CHANGE |
| 45 | Change can sometimes be a good thing for a band program. |  | CHANGE |
| 46 | Change doesn't always work well. |  | CHANGE |
| 47 | Change is good, even if I don't like it very much. |  | CHANGE |
| 48 | Change is sometimes bad |  | CHANGE |
| 49 | Change would be hard for upper class students |  | CHANGE |
| 50 | Everyone in the band would miss our teacher. | 2 | CHANGE |
| 51 | Everything happens for a reason. |  | CHANGE |
| 52 | Everything I've known about band will be thrown out the window. |  | CHANGE |
| 53 | Everything we built would be gone with a new teacher. |  | CHANGE |
| 54 | Everything will work out fine. |  | CHANGE |
| 55 | I am strongly against my band teacher leaving. |  | CHANGE |
| 56 | I am unsure of what the outcome of a teacher change would be. |  | CHANGE |
| 57 | I am used to teacher changes. |  | CHANGE |
| 58 | I don't care who the teacher is. |  | CHANGE |
| 59 | I don't feel either way about a teacher change. |  | CHANGE |
| 60 | I don't want my teacher to leave. |  | CHANGE |
| 61 | I don't want to deal with change. |  | CHANGE |
| 62 | I don't want to have a new band teacher. |  | CHANGE |
| 63 | I hate when band teachers leave, because it is always hard to start over. |  | CHANGE |
| 64 | I like my teacher, but I would also like change. |  | CHANGE |
| 65 | I like our old director. |  | CHANGE |
| 66 | I like our teacher's traditions, but new is always good. |  | CHANGE |
| 67 | I like the teacher I have. |  | CHANGE |
| 68 | I look forward to trying different ways of doing things |  | CHANGE |


| \# | Statement | $f$ | Topic Category |
| :---: | :---: | :---: | :---: |
| 69 | I ' $m$ not that close to $m y$ band teacher, so it wouldn't make much of a difference. |  | CHANGE |
| 70 | I sometimes miss the old ways. |  | CHANGE |
| 71 | I will really miss my teacher. | 2 | CHANGE |
| 72 | I wonder how having a new teacher will be. | 4 | CHANGE |
| 73 | I would adapt to a new teacher. |  | CHANGE |
| 74 | I would be nervous about the future of our program if our teacher decided to leave. |  | CHANGE |
| 75 | I would be sad if my teacher left because he/she is a very good teacher. |  | CHANGE |
| 76 | I would be sad if our teacher decided to leave. | 2 | CHANGE |
| 77 | I would be sad if our teacher decided to leave. |  | CHANGE |
| 78 | I would be wary of a less enthusiastic director, or loss of discipline within the group. |  | CHANGE |
| 79 | I would be wary of losing band traditions. |  | CHANGE |
| 80 | I would dislike it very much if I found out they were switching band teachers. |  | CHANGE |
| 81 | I would expect some changes to the band program, but they should try and keep things the same. |  | CHANGE |
| 82 | I would feel abandoned if my teacher left |  | CHANGE |
| 83 | I would feel the loss of someone I knew. |  | CHANGE |
| 84 | I would have to get to know another teacher |  | CHANGE |
| 85 | I would not want our teacher to leave |  | CHANGE |
| 86 | I would welcome changes to the band program with a new teacher. |  | CHANGE |
| 87 | I wouldn't want any changes made to the band program with a new teacher. |  | CHANGE |
| 88 | I'm afraid of change; I do not want to constantly change how we do things. |  | CHANGE |
| 89 | I'm not ready for a change in band teachers. |  | CHANGE |
| 90 | I'm ready for a change, but it might not go well at first. |  | CHANGE |
| 91 | I'm ready for a change, but it won't be good for a while. |  | CHANGE |
| 92 | I'm ready for a change, it will be good for the program. |  | CHANGE |


| \# | Statement | $f$ | Topic Category |
| :---: | :---: | :---: | :---: |
| 93 | It is devastating to a program when a teacher leaves. |  | CHANGE |
| 94 | It kills me when my band teachers leave. |  | CHANGE |
| 95 | It would be difficult for the older students to get used to the new teacher. |  | CHANGE |
| 96 | It would be difficult to replace a teacher who works with students individually and establishes a positive rapport. |  | CHANGE |
| 97 | I think it would take a while to adapt to a new band teacher | 2 | CHANGE |
| 98 | It would take a while to get used to a new band teacher |  | CHANGE |
| 99 | It's going to suck getting a new teacher. |  | CHANGE |
| 100 | It's hard to be upset with a teacher who leaves for a better opportunity. |  | CHANGE |
| 101 | My teacher is like family to me, and I would be upset if he or she decided to leave. |  | CHANGE |
| 102 | New teachers make it harder, because they have completely stupid ideas. |  | CHANGE |
| 103 | Nobody knows what to expect from a new teacher. |  | CHANGE |
| 104 | Our band program would fall apart and become undisciplined. |  | CHANGE |
| 105 | Our band program would fall apart without teacher stability. | 2 | CHANGE |
| 106 | Our school would not have such a great band program with a new teacher. |  | CHANGE |
| 107 | People will be sad, but they'll warm up to the new teacher. |  | CHANGE |
| 108 | Some students may just give up if there is a teacher change. |  | CHANGE |
| 109 | Sometimes I really end up liking my teacher, and it would be frustrating if they left. |  | CHANGE |
| 110 | Sometimes the band members feel like they weren't good enough, and that's why the teacher decided to leave. |  | CHANGE |
| 111 | The band program would continue to exist with a new teacher. |  | CHANGE |
| 112 | The new director will be different. |  | CHANGE |
| 113 | The program would have to start over. |  | CHANGE |
| 114 | The way we learn would change. |  | CHANGE |


| \# | Statement | $f$ |
| ---: | :--- | :--- |
| 115 | There is always a possibility that a new <br> teacher will bring a better result. | CHANGE |
| 116 | There is nothing positive about our teacher <br> leaving. | CHANGE |
| 117 | Things will be different. | CHANGE |
| 118 | Things will become crazy in band. | CHANGE |
| 119 | Things will not change that much. | CHANGE |
| 120 | We could experience different methods <br> and styles of teaching, and learn different | CHANGE |
|  | ways to do things. |  |
| 121 | We need a change in this school | CHANGE |
| 122 | We will have to get used to a whole new <br>  <br> style. | CHANGE |
| 123 | We will have to learn new techniques. | CHANGE |
| 124 | We will need to adjust to change. | CHANGE |
| 125 | We would have to adjust to a new teacher. | CHANGE |
| 126 | We would have to learn the new ways of a <br> new teacher. | CHANGE |
| 127 | We would make the best of a teacher <br> change. | CHANGE |
| 128 | We'd have to deal with a new teacher. | CHANGE |
| 129 | We'd have to start over again with a new <br> teacher. | CHANGE |
| 130 | We'll have to learn more. | CHANGE |
| 131 | We'll have to work differently. | CHANGE |
| 132 | What happens if I don't like the new | CHANGE |
| teacher? | CONFICT |  |
| 133 | I am not going to participate in a college <br> marching band for any reason. | COLLEGE |
| 134 | I would find out more about a college <br> marching band teacher before I decided to <br> join. | COLLEGE |
| 135 | I would participate in a college marching <br> band regardless of who is teaching it. | COLLEGE |
| 136 | Concerts would be better with a new <br> teacher. | CONCERTS |
| 137 | I don't like concerts, I prefer rehearsing <br> during class time. | CONCERTS |
| 138 | I like to perform concerts with my current |  |
| band teacher. |  |  |


| \# | Statement | $f$ | Topic Category |
| :---: | :---: | :---: | :---: |
| 140 | I think students, parents, and the new teacher will have conflicts for a few years. |  | CONFLICT |
| 141 | I think the older students will have the most problems (conflicts) with a new teacher. |  | CONFLICT |
| 142 | Students can be to "loyal" to an old teacher, and create problems for a new one. |  | CONFLICT |
| 143 | Students may feel upset about the loss of a previous teacher, and may battle the replacement |  | CONFLICT |
| 144 | Students would react negatively to a new teacher. |  | CONFLICT |
| 145 | There may be problems (conflicts) with a new teacher at first, but they will probably go away. |  | CONFLICT |
| 146 | A new teacher could be more strict, not as much fun, or not give us as many opportunities. |  | EXPECTATIONS |
| 147 | A new teacher may give us more freedom. | 2 | EXPECTATIONS |
| 148 | A new teacher may not make me learn to read music. |  | EXPECTATIONS |
| 149 | A new teacher may not make me work as hard. |  | EXPECTATIONS |
| 150 | A new teacher might not care as much |  | EXPECTATIONS |
| 151 | A new teacher would be less stressful. |  | EXPECTATIONS |
| 152 | A new teacher would have higher expectations of us. |  | EXPECTATIONS |
| 153 | A new teacher would have lower expectations of us. |  | EXPECTATIONS |
| 154 | A new teacher would make us practice more. |  | EXPECTATIONS |
| 155 | A new teacher would mellow us out, and not be as scary. |  | EXPECTATIONS |
| 156 | A new teacher would not expect as much from us. |  | EXPECTATIONS |
| 157 | Band would be easier with a new teacher. |  | EXPECTATIONS |
| 158 | Band would be harder with a new teacher. |  | EXPECTATIONS |
| 159 | I think my current band teacher's expectations of us are at a reasonable level. |  | EXPECTATIONS |
| 160 | I think my current band teacher's expectations of us are very high. |  | EXPECTATIONS |


| \# | Statement | $f$ Topic Category |
| :---: | :---: | :---: |
| 161 | I think my current band teacher's expectations of us are very low. | EXPECTATIONS |
| 162 | If my teacher left, the program would rely more on the students. | EXPECTATIONS |
| 163 | Most likely the next teacher would be easier. | EXPECTATIONS |
| 164 | No more playing tests if our teacher leaves. | EXPECTATIONS |
| 165 | The new teacher could be stricter than our current one. | EXPECTATIONS |
| 166 | There will still be a marching band with a new teacher. | EXPECTATIONS |
| 167 | We don't know who the new teacher would be. | EXPECTATIONS |
| 168 | With a new band teacher, I my effort level would remain the same. | EXPECTATIONS |
| 169 | With a new band teacher, I would decrease the amount of effort that I give to band class. | EXPECTATIONS |
| 170 | With a new band teacher, I would have to increase the amount of effort that I give to band class. | EXPECTATIONS |
| 171 | With a new band teacher, we would probably rehearse less. | EXPECTATIONS |
| 172 | With a new band teacher, we would probably rehearse more. | EXPECTATIONS |
| 173 | A new teacher may be less experienced. | EXPERIENCE |
| 174 | A new teacher may be more experienced | EXPERIENCE |
| 175 | A new teacher may not be as experienced as our current teacher. | EXPERIENCE |
| 176 | A new teacher may not know what they are doing. | EXPERIENCE |
| 177 | Different teaching techniques may be more effective | EXPERIENCE |
| 178 | I would be happy to have a first year teacher as my new band teacher. | EXPERIENCE |
| 179 | I would want my new teacher to have some high school band teaching experience. | EXPERIENCE |
| 180 | I wouldn't care about the amount of the new teachers experience in the classroom. | EXPERIENCE |
| 181 | I would be happy that I got to know my teacher before they left. | FRIENDS |


| \# | Statement | Topic Category |
| :---: | :---: | :---: |
| 182 | I would quit band if my friends also quit band because our teacher was leaving. | FRIENDS |
| 183 | My friends may quit band if our band teacher leaves the program. | FRIENDS |
| 184 | My friends will NOT quit band if our band teacher leaves the program. | FRIENDS |
| 185 | My friends will quit band if our band teacher leaves the program. | FRIENDS |
| 186 | My friends would quit band if the teacher left. | FRIENDS |
| 187 | We would be losing a great, important figure in our lives. | FRIENDS |
| 188 | I would want a new teacher to be the opposite gender as my current band teacher. | GENDER |
| 189 | I would want a new teacher to be the same gender as my current band teacher. | GENDER |
| 190 | The new band teacher's gender makes no difference to me. | GENDER |
| 191 | I would not want to be involved in the selection process of a new band teacher. | INVOLVED |
| 192 | I would want to be involved in the selection process of a new band teacher. | INVOLVED |
| 193 | A new teacher could be better than the old one. | JUDGEMENT |
| 194 | A new teacher may bring in more students to the program | JUDGEMENT |
| 195 | A new teacher might make band less fun than it is now. | JUDGEMENT |
| 196 | A new teacher might make band more fun than it is now. | JUDGEMENT |
| 197 | A new teacher would never be the same as the old teacher. | JUDGEMENT |
| 198 | Band would not be as enjoyable with a new teacher. | JUDGEMENT |
| 199 | I absolutely would hate the fact of my band teacher leaving. | JUDGEMENT |
| 200 | I would give a new teacher a chance before making any judgments on staying or leaving the program. | JUDGEMENT |
| 201 | Maybe the new teacher would be cool. | JUDGEMENT |
| 202 | My current band program could be a lot better. | JUDGEMENT |


| \# | Statement | $f$ Topic Category |
| :---: | :---: | :---: |
| 203 | My current band teacher is about average compared to my other teachers this semester. | JUDGEMENT |
| 204 | My current band teacher is my favorite teacher this semester. | JUDGEMENT |
| 205 | My current band teacher is my least favorite teacher this semester. | JUDGEMENT |
| 206 | My current band teacher makes the overall band experience kind of fun. | JUDGEMENT |
| 207 | My current band teacher makes the overall band experience not very fun. | JUDGEMENT |
| 208 | My current band teacher makes the overall band experience really fun. | JUDGEMENT |
| 209 | My current teacher has more skills and efficiency compared to any new teacher. | JUDGEMENT |
| 210 | My current teacher is a professional, and it would be irrational to replace him/her. | JUDGEMENT |
| 211 | Next year would be great with a new band teacher. | JUDGEMENT |
| 212 | Next year would be tough with a new band teacher. | JUDGEMENT |
| 213 | Our band program would go from the best to the worst. | JUDGEMENT |
| 214 | Our band would perform at about the same level if we got a new band teacher. | JUDGEMENT |
| 215 | Our band would perform better if we got a new teacher. | JUDGEMENT |
| 216 | Our band would perform worse if we got a new teacher. | JUDGEMENT |
| 217 | Our band, under a new teacher, will not be as good. | JUDGEMENT |
| 218 | Our performance level would not change with a new teacher. | JUDGEMENT |
| 219 | Our show next year will be terrible if our teacher left. | JUDGEMENT |
| 220 | Our teacher's departure would mean taking the band's talent with him/her | JUDGEMENT |
| 221 | Seniors would not be affected if our current teacher leaves. | JUDGEMENT |
| 222 | The band program would go downhill with a new teacher. | JUDGEMENT |
| 223 | The band program would likely decline with a new teacher. | JUDGEMENT |


| \# | Statement | $f$ Topic Category |
| :---: | :---: | :---: |
| 224 | The new band teacher could be just as good as our old one. | JUDGEMENT |
| 225 | The program as a whole would probably feel abandoned. | JUDGEMENT |
| 226 | There are probably better band teachers than mine. | JUDGEMENT |
| 227 | There aren't many band teachers good enough to replace my current teacher. | JUDGEMENT |
| 228 | We won't be as good with a new director. | JUDGEMENT |
| 229 | What if the new teacher doesn't make us better? | JUDGEMENT |
| 230 | I would use a teacher change as an opportunity to become a leader in the band. | LEADERSHIP |
| 231 | It's good to have change, it will show how strong our band is. | LEADERSHIP |
| 232 | Leaders should show support of a new teacher for the benefit of the entire program. | LEADERSHIP |
| 233 | We would lose our leadership structure, which would make band more chaotic. | LEADERSHIP |
| 234 | A new teacher may bring less motivation. | MOTIVATION |
| 235 | I am not motivated to get better on my instrument by my current teacher. | MOTIVATION |
| 236 | I would be more motivated to perform better for a new teacher. | MOTIVATION |
| 237 | I would NOT be more motivated to perform better for a new teacher. | MOTIVATION |
| 238 | I would want a new teacher to be happy with our performance level. | MOTIVATION |
| 239 | If my teacher left, I would become lazy and not work as hard anymore. | MOTIVATION |
| 240 | It doesn't matter who our band teacher is, we should still give the same effort. | MOTIVATION |
| 241 | My current teacher motivates me to play my best. | MOTIVATION |
| 242 | Our old teacher stresses us out by practicing all the time. | MOTIVATION |
| 243 | Students may become uninspired by the replacement and quit. | MOTIVATION |
| 244 | Students would care less and less about band if the new director wasn't exactly like the old one. | MOTIVATION |


| \# | Statement | $f$ | Topic Category |
| :---: | :---: | :---: | :---: |
| 245 | The new teacher may not inspire us as much as our current teacher. |  | MOTIVATION |
| 246 | We might not have as busy of a schedule with a new teacher. |  | MOTIVATION |
| 247 | We would lack dedication with a new teacher, and lose many resources necessary for our band to function well. |  | MOTIVATION |
| 248 | A new teacher will NOT select better music than my current band teacher. |  | MUSIC |
| 249 | A new teacher will select better music than my current band teacher. |  | MUSIC |
| 250 | Band is band...we would still be playing music. |  | MUSIC |
| 251 | Band is fun, whoever the teacher is. | 2 | MUSIC |
| 252 | Band teachers do not change how I feel about band. |  | MUSIC |
| 253 | Band would always exist at my school |  | MUSIC |
| 254 | I don't care. |  | MUSIC |
| 255 | I never cared much about band in the first place. |  | MUSIC |
| 256 | I really don't like the music that my current band teacher selects for us to play. |  | MUSIC |
| 257 | I would still be in band no matter who the teacher is. |  | MUSIC |
| 258 | I would still be playing the music that I love. |  | MUSIC |
| 259 | It doesn't matter who our band teacher is. It's the students that make the music. |  | MUSIC |
| 260 | It's just another teacher. |  | MUSIC |
| 261 | Music is music, band is band. |  | MUSIC |
| 262 | My current band teacher selects really great music for us to play. |  | MUSIC |
| 263 | My current band teacher should find better music for us to play. |  | MUSIC |
| 264 | My friends and I would still be in band regardless of the teacher. |  | MUSIC |
| 265 | Students lose familiarity with music. |  | MUSIC |
| 266 | Students still play music. |  | MUSIC |
| 267 | Teachers come and go, it's just another teacher. | 2 | MUSIC |
| 268 | The same stuff will just be taught by a new person. |  | MUSIC |


| \# | Statement | $f$ Topic Category |
| :---: | :---: | :---: |
| 269 | We get new teachers all the time, so it's not like it's new. | MUSIC |
| 270 | We would still have band | MUSIC |
| 271 | We'll always have fine arts. | MUSIC |
| 272 | I wish my parents were less involved with the band program. | PARENTS |
| 273 | I wish my parents were more involved with the band program. | PARENTS |
| 274 | My parents are involved in helping the band program be a success. | PARENTS |
| 275 | My parents are not involved at all with the band program. | PARENTS |
| 276 | My parents would let me quit band at any time. | PARENTS |
| 277 | My parents would make me stay in band, even if there is a new teacher. | PARENTS |
| 278 | My parents would want me to stay in band, even if there is a new teacher. | PARENTS |
| 279 | A new teacher may not be able to lead. | PERSONALITY |
| 280 | A new teacher will be excited about being with a new group of students. | PERSONALITY |
| 281 | I don't want someone who has never taught above middle school. | PERSONALITY |
| 282 | I look up to my current teacher, and would miss them if they didn't return. | PERSONALITY |
| 283 | I may like the new teacher more than my current teacher. | PERSONALITY |
| 284 | I see my current teacher working well with other teachers, coaches, and administrators on campus. | PERSONALITY |
| 285 | I think a new teacher would work better with the other teachers, coaches, and administrators on campus. | PERSONALITY |
| 286 | I would be happy if my teacher left for a better opportunity. | PERSONALITY |
| 287 | I would miss our old teacher. | PERSONALITY |
| 288 | My current band teacher tries really hard to make us better. | PERSONALITY |
| 289 | My current band program is great because of other reasons than my current teacher. | PERSONALITY |
| 290 | My current band teacher is somewhat organized. | PERSONALITY |


| \# | Statement | $f$ Topic Category |
| :---: | :---: | :---: |
| 291 | My current band teacher could try harder to make us better. | PERSONALITY |
| 292 | My current band teacher is irreplaceable. | PERSONALITY |
| 293 | My current band teacher is not at all organized. | PERSONALITY |
| 294 | My current band teacher is very organized. | PERSONALITY |
| 295 | My current band teacher makes our program great. | PERSONALITY |
| 296 | My teacher doesn't care enough about us to stick around. | PERSONALITY |
| 297 | Our teacher left because we weren't a priority in their life. | PERSONALITY |
| 298 | Students will think less of a new teacher if they were attached to their old one. | PERSONALITY |
| 299 | Teachers do the same things in different ways. | PERSONALITY |
| 300 | The new teacher could turn out to be not very good. | PERSONALITY |
| 301 | The old teacher was bringing down our program. | PERSONALITY |
| 302 | We might get a bad teacher. | PERSONALITY |
| 303 | We might lose a passionate teacher. | PERSONALITY |
| 304 | We would be losing a talented person. | PERSONALITY |
| 305 | We would get a better and more understanding teacher. | PERSONALITY |
| 306 | A new band teacher would inspire me to practice more than I do now. | PRACTICE |
| 307 | My current band teacher inspires me to practice at home. | PRACTICE |
| 308 | Nothing could inspire me to practice at home. | PRACTICE |
| 309 | Sometimes my current band teacher inspires me to practice my instrument at home. | PRACTICE |
| 310 | A new teacher may inspire me to take private lessons. | PRIVATE LESSONS |
| 311 | I am not inspired by my current teacher to take private lessons. | PRIVATE LESSONS |
| 312 | If I'm not taking lessons now, that wouldn't change with a new teacher. | PRIVATE LESSONS |
| 313 | My current teacher inspires me to take private lessons. | PRIVATE LESSONS |


| \# | Statement | $f$ | Topic Category |
| :---: | :---: | :---: | :---: |
| 314 | A new and better band teacher can come in and teach newer and better things that didn't happen with the old teacher. |  | QUALITY |
| 315 | A new teacher could be an adventure. |  | QUALITY |
| 316 | A new teacher could be better or worse than our current one. |  | QUALITY |
| 317 | A new teacher could be better than the old one. |  | QUALITY |
| 318 | A new teacher could help or hurt the program. |  | QUALITY |
| 319 | A new teacher could make us better |  | QUALITY |
| 320 | A new teacher could make us worse. |  | QUALITY |
| 321 | A new teacher may be a good musical influence. |  | QUALITY |
| 322 | A new teacher may be better than the one we have. | 5 | QUALITY |
| 323 | A new teacher may be nicer. |  | QUALITY |
| 324 | A new teacher might get us to score higher at State. |  | QUALITY |
| 325 | A new teacher might make our band better. |  | QUALITY |
| 326 | A new teacher would bring a chance for us to get better. |  | QUALITY |
| 327 | Every teacher has something to offer our program. |  | QUALITY |
| 328 | Having a band teacher leave is hard because they are usually everyone's favorite teacher. |  | QUALITY |
| 329 | Having a new band teacher would be a good experience. |  | QUALITY |
| 330 | How good of a teacher they are will affect how much they are missed. |  | QUALITY |
| 331 | I did not like my band teacher, and am glad he/she is leaving. |  | QUALITY |
| 332 | I don't care. |  | QUALITY |
| 333 | I don't like my current teacher, so getting a new teacher would be an improvement. |  | QUALITY |
| 334 | I don't want my teacher to leave. | 2 | QUALITY |
| 335 | I like my teacher, so I wish he/she would stay. |  | QUALITY |
| 336 | I like the teacher I have. |  | QUALITY |
| 337 | I may not like the new teacher. |  | QUALITY |


| \# | Statement | $f$ |
| :--- | :--- | :--- |
| 338 | I would hate to lose a teacher who is fun <br> and cool. | QUALITY |
| 339 | Maybe a new teacher would be better for <br> the school. | QUALITY |
| 340 | More knowledge and skill may be learned <br> from a new teacher | QUALITY |
| 341 | No one else can maintain this good of a <br> program. | QUALITY |
| 342 | No one else can do this job as great as my <br> current teacher. | QUALITY |
| 343 | Our current teacher is great. |  |
| 344 | Our marching band would not be as good. |  |
| 345 | Our teacher could not be replaced | QUALITY |
| 346 | Our teacher is a jerk for leaving. How <br> could he leave us? | QUALITY |
| 347 | Our teacher is the best, I do not want them <br> to leave. | QUALITY |
| 348 | The band may get better or worse. |  |
| 349 | The band program will be ruined if our <br> teacher leaves. | QUALITY |
| 350 | The new teacher might be worse than the <br> one we have. | 2 |


| $\#$ | Statement | $f$ |
| :--- | :--- | :--- |
| 362 | A new teacher may perform similar music <br> as the old teacher. | TEACHING STYLES |
| 363 | A new teacher may spend more time on <br> music theory. | TEACHING STYLES |
| 364 | A new teacher may teach music of <br> different styles | 4 |
| 365 | TEACHING STYLES |  |
| A new teacher might have new techniques |  |  |
| of methods. |  |  |$\quad$ TEACHING STYLES


| \# | Statement | $f$ |
| :--- | :--- | :--- |
| 384 | A new teacher gives the band a chance to <br> restart and gain a new energy and <br> optimism. | TURNOVER |
| 385 | A new teacher may bring a new <br> experience. | TURNOVER |
| 386 | A new teacher may have more teaching <br> experience. | TURNOVER |
| 387 | A new teacher may teach us something <br> our old teacher couldn't. | TURNOVER |
| 388 | A new teacher may try new things |  |
| 389 | A new teacher means we would be <br> exposed to new good ideas. | TURNOVER |
| 390 | A new teacher might be able to teach us <br> new things. | 2 |

\(\left.$$
\begin{array}{rll}\hline \text { \# } & \text { Statement } & f \\
\hline 407 & \begin{array}{l}\text { Getting a new band teacher next year } \\
\text { would NOT be a big deal for the other } \\
\text { students. }\end{array} & \text { TURNOVER } \\
408 & \begin{array}{l}\text { Getting a new teacher would not be all } \\
\text { that bad. }\end{array} & \text { TURNOVER } \\
409 & \begin{array}{l}\text { Having a teacher you are close to leave } \\
\text { would be a shock. }\end{array}
$$ \& TURNOVER <br>
410 \& \begin{array}{l}Hopefully our new teacher will decide to <br>

stay longer.\end{array} \& TURNOVER\end{array}\right]\)| TURNOVER |
| :--- |


| \# | Statement | $f$ Topic Category |
| :---: | :---: | :---: |
| 428 | I would enjoy marching band more with a new teacher. | TURNOVER |
| 429 | I would feel abandoned if my current band teacher left us to go to another high school. | TURNOVER |
| 430 | I would get to experience a new teacher's teaching. | TURNOVER |
| 431 | I would get to learn a new teacher's ways. | TURNOVER |
| 432 | I would have to get to know another teacher | TURNOVER |
| 433 | I would have to get used to a new director and new traditions. | TURNOVER |
| 434 | I would help a new teacher try to be more successful in their first year. | TURNOVER |
| 435 | I would look forward to having other people's point of view on music. | TURNOVER |
| 436 | I would miss our old teacher. | TURNOVER |
| 437 | I would not be helpful to a new teacher, they can figure it out on their own. | TURNOVER |
| 438 | I would NOT be upset if my current band teacher decided to retire. | TURNOVER |
| 439 | I would not be upset if my current band teacher left us to go to another high school. | TURNOVER |
| 440 | I would not trust a new teacher coming to my school. | TURNOVER |
| 441 | I would not want to know that my band teacher was leaving until after the school year was over. | TURNOVER |
| 442 | I would prefer to have the same band teacher for all four years of high school | TURNOVER |
| 443 | I would remind the new teacher of how we do things in our band program. | TURNOVER |
| 444 | I would want my current band teacher to tell all of the students at the same time if they were leaving. | TURNOVER |
| 445 | I would want my current band teacher to tell me personally if they were leaving. | TURNOVER |
| 446 | I would want my current band teacher to tell the leadership or upper class students first if they were leaving. | TURNOVER |
| 447 | I would want to know as soon as possible that my current band teacher was leaving. | TURNOVER |


| $\#$ | Statement | $f$ |
| ---: | :--- | :--- |
| 448 | I would want to know that my band <br> teacher was leaving as soon as he or she | TURNOVER |
|  | was ready to tell us. |  |
| 449 | I would want to tell a new teacher about <br> the best parts of our band program before <br> the semester began. | TURNOVER |
| 450 | I wouldn't feel anything if my current band <br> teacher left us to go to another high | TURNOVER |
|  | school. |  |


| \# | Statement |  | Topic Category |
| :---: | :---: | :---: | :---: |
| 470 | Someone else will come in bringing something new and great to our band. |  | TURNOVER |
| 471 | Sometimes getting a new teacher sounds like a good experience. |  | TURNOVER |
| 472 | Sometimes having the same teacher would be boring. |  | TURNOVER |
| 473 | Sometimes I wouldn't mind a new teacher, but other times I want the same one. |  | TURNOVER |
| 474 | Sometimes it is good to have a new person so I can better myself as a musician. |  | TURNOVER |
| 475 | Teachers come and go, it's just another teacher. | 2 | TURNOVER |
| 476 | The band would change for the better with a new teacher. |  | TURNOVER |
| 477 | The band would have to adapt to a new teaching style. |  | TURNOVER |
| 478 | The band would have to get used to a new teacher. |  | TURNOVER |
| 479 | The more teachers you have, the better you become. |  | TURNOVER |
| 480 | The transition between band teachers is challenging. |  | TURNOVER |
| 481 | There are better and worse qualities about getting a new teacher. |  | TURNOVER |
| 482 | There are both positive and negative feelings about my band teacher leaving. |  | TURNOVER |
| 483 | There is always something new to learn from a different teacher. |  | TURNOVER |
| 484 | There really wouldn't be that many positive things about a teacher change at first, but we will get over it. |  | TURNOVER |
| 485 | There will be a bad learning environment for a new teacher. |  | TURNOVER |
| 486 | There will be a new way to learn stuff. |  | TURNOVER |
| 487 | There would be no band if our teacher left. (not replaced) | 3 | TURNOVER |
| 488 | Too much change isn't good. We need balance and stability. |  | TURNOVER |
| 489 | We could get different feedback and opinions on how to improve our style of playing than our old director. |  | TURNOVER |
| 490 | We will have to teach the new teacher how we do things at our school. |  | TURNOVER |


| \# | Statement | $f$ | Topic Category |
| :---: | :---: | :---: | :---: |
| 491 | We will learn a new way to play music. |  | TURNOVER |
| 492 | We would feel lost if our teacher left. |  | TURNOVER |
| 493 | We would gain new knowledge from a different band teacher. |  | TURNOVER |
| 494 | We would get the opportunity to meet someone new | 3 | TURNOVER |
| 495 | We would have to start all over with a new teacher. |  | TURNOVER |
| 496 | We would no longer have to deal with aggravating actions from our teacher who is leaving. |  | TURNOVER |
| 497 | We're going to have a hard time getting the new teacher adjusted to our system. |  | TURNOVER |
| 498 | We've had several teachers, another change wouldn't matter |  | TURNOVER |
| 499 | When we lose a band teacher, we just get another one. |  | TURNOVER |
| 500 | Why does it matter who it is who teaches us? |  | TURNOVER |
| 501 | With a new teacher, I would have to adjust to new rules. |  | TURNOVER |

## APPENDIX C

SPREADSHEET FORMULAS AND CALCULATIONS OF JUDGING RESULTS STATEMENTS 1 - 3

| Formulas to calculate Frequency, Proportion, Scale Value, Q -Value, 25 th percentile, 75 th percentile |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Statements |  | Intensity Ratings with Frequencies and Proportions |  |  |  |  |  |  |
|  |  | A | B | c | D | E | F | G |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | $f$ | 14 | 25 | 25 | 16 | 8 | 0 | 3 |
|  | sumf | =SUM (C10) | =SUM(C10:D10) | =SUM(C10:E10) | =SUM $/$ C10:F10 | =SUM(C10:G10) | =SUM $/$ C10: H 10 ) | =SUM(C10:110) |
|  | \% | =C10/95 | =D10/95 | =E10/95 | =F10/95 | =G10/95 | = $\mathrm{H} 10 / 95$ | =110/95 |
|  | $c p$ | =SUM(C12:C12) | =SUM (C12:D12) | =SUM (C12:E12) | =SUM $/$ C12:F12 | =SUM(C12:G12) | =SUM $/ \mathrm{C} 12$ :H12) | =SUM (C12:I12) |
| 2 | $f$ | 0 | 0 | 1 | 1 | 2 | 4 | 1 |
|  | sumf | =SUM (C15) | =SUM(C15:D15) | =SUM(C15:E15) | =SUM(C15:F15) | =SUM(C15:G15) | =SUM/C15:H15) | =SUM(C15:115) |
|  | \% | =C15/95 | =D15/95 | =E15/95 | =F15/95 | =615/95 | = $\mathrm{H} 15 / 95$ | =115/95 |
|  | $c p$ | =SUM(C17:C17) | =SUM (C17:D17) | =SUM(C17:E17) | =SUM $(C 17$ :F17) | =SUM(C17:G17) | =SUM 4 (17:H17) | =SUM (C17:117) |
| 3 | $f$ | 0 | 0 | 2 | 5 | 0 | 3 | 7 |
|  | sumf | =SUM (C20) | =SUM (C20:D20) | =SUM (C20:E20) | =SUM $/$ C20:F20) | =SUM (C20:G20) | =SUM $/$ C20:H20) | =SUM (C20:120) |
|  | \% | =C20/95 | =D20/95 | =E20/95 | =F20/95 | =G20/95 | = $\mathrm{H} 20 / 95$ | $=120 / 95$ |
|  | $c p$ | =SUM(C22:C22) | =SUM (C22:D22) | =SUM(C22:E22) | =SUM 4 C22:F22) | =SUM(C22:G22) | =SUM 3 C22:H22) | =SUM (C22:122) |


|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
|  |  |  |  |  | Scale | Q |
|  |  |  |  |  | Value | Value |
|  |  |  |  |  |  |  |
| G | H | 1 | J | K |  |  |
| 7 | 8 | 9 | 10 | 11 |  |  |
|  |  |  |  |  |  |  |
| 3 | 1 | 0 | 3 | 0 |  |  |
| =SUM (C10:110) | =SUM(C10:J10) | =SUM (C10:K10) | =SUM(C10:L10) | =SUM(C10:M10) | $=(E 8-0.5)+((0.5-\mathrm{D} 13) / \mathrm{E} 12)^{* 1}$ | =Q11-P11 |
| =110/95 | =J10/95 | =K10/95 | =L10/95 | =M10/95 |  |  |
| =SUM(C12:112) | =SUM(C12:J12) | =SUM (C12:K12) | =SUM(C12:L12) | =SUM (C12:M12) |  |  |
|  |  |  |  |  |  |  |
| 1 | 6 | 7 | 17 | 56 |  |  |
| =SUM(C15:115) | =SUM(C15:J15) | =SUM (C15:K15) | =SUM(C15:L15) | =SUM(C15:M15) | $=($ M8-0.5 $)+((0.5-\mathrm{L} 18) / \mathrm{M} 17)^{*} 1$ | =Q16-P16 |
| =115/95 | =J15/95 | =K15/95 | =L15/95 | =M15/95 |  |  |
| =SUM (C17:117) | =SUM(C17:J17) | =SUM (C17:K17) | =SUM(C17:L17) | =SUM(C17:M17) |  |  |
|  |  |  |  |  |  |  |
| 7 | 8 | 14 | 21 | 35 |  |  |
| =SUM (C20:120) | =SUM(C20:J20) | =SUM (C20:K20) | =SUM(C20:L20) | =SUM (C20:M20) | $=(L 8-0.5)+((0.5-K 23) / L 22) * 1$ | =Q21-P21 |
| =120/95 | =J20/95 | =K20/95 | = L20/95 | =M20/95 |  |  |
| =SUM(C22:122) | =SUM(C22:J22) | =SUM(C22:K22) | =SUM (C22:L22) | =SUM (C22:M22) |  |  |


|  |  |
| :---: | :---: |
|  |  |
| 25th | 75th |
| Percentile | Percentile |
|  |  |
| $=0.25{ }^{*} \mathrm{M} 11$ | $=0.75{ }^{*} \mathrm{M} 11$ |
|  |  |
|  |  |
|  |  |
| $\begin{gathered} =(\mathrm{D} 8-0.5)+((0.25- \\ \mathrm{C} 13) / \mathrm{D} 12)^{*} 1 \end{gathered}$ | $=($ F8-0.5 $)+((0.75-\mathrm{E} 13) / \mathrm{F} 12)^{*} 1$ |
|  |  |
|  |  |
|  |  |
|  |  |
| $=(L 8-0.5)+((0.25-\mathrm{K} 18) / \text { L17 })^{*} 1$ | $\begin{gathered} =(\text { M8-0.5 })+((0.75- \\ \text { L18)/M17)* } \end{gathered}$ |
|  |  |
|  |  |
|  |  |
|  |  |
| $=(18-0.5)+((0.25-123) / / 22)^{*} 1$ | $\begin{gathered} =(\mathrm{M} 8-0.5)+((0.75- \\ \mathrm{L} 23) / \mathrm{M} 22)^{*} 1 \end{gathered}$ |
|  |  |
|  |  |

## APPENDIX D

## RESULTS OF PHASE TWO STATEMENT SORTING

| \# | Scale value | $\begin{array}{r} \mathrm{Q} \\ \text { Value } \end{array}$ | Statements | Qualify |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 2.84 | 2.06 | A new teacher might attract more students to join band. | * |
| 2 | 10.65 | 1.47 | I would quit band before meeting the new teacher. | * |
| 3 | 9.9 | 2.48 | I would quit band if the new teacher did not comply with our band's previous standards and traditions. | * |
| 4 | 10.67 | 1.53 | If my current band teacher left, I would quit band. | * |
| 5 | 2.88 | 3.24 | If my current band teacher left, I would stay in band no matter what. |  |
| 6 | 8.57 | 3.11 | Students quitting because of a teacher change negatively affects the entire program. |  |
| 7 | 8.9 | 2.37 | A new start isn't a good thing for a band. It will feel like we are learning all over again. | * |
| 8 | 3.56 | 2.32 | A new teacher might be better for the band. | * |
| 9 | 5.86 | 0.98 | A new teacher will create both good and bad memories. | * |
| 10 | 3.98 | 2.03 | Although we were used to the old teacher, we could use some new changes. | * |
| 11 | 4.39 | 2.01 | Change is good, even if I don't like it very much. | * |
| 12 | 7.32 | 1.72 | Change is sometimes bad. | * |
| 13 | 10.15 | 2.03 | Everything I've known about band will be thrown out the window. | * |
| 14 | 9.33 | 2.31 | Everything we built would be gone with a new teacher. | * |
| 15 | 5.61 | 2.01 | Having a new teacher would not affect the freshman class. | * |
| 16 | 6.05 | 0.64 | I don't know if a teacher change would make things better or worse. | * |
| 17 | 7.09 | 3.34 | I don't want my teacher to leave. |  |
| 18 | 6.13 | 2.01 | I ' $m$ not that close to my band teacher, so it wouldn't make much of a difference. | * |
| 19 | 7.2 | 2.97 | I will really miss my teacher. |  |
| 20 | 5.6 | 1.77 | I wonder how having a new teacher would be. | * |
| 21 | 5.58 | 1.56 | I would expect some changes to the band program, but they should try and keep things the same. | * |
| 22 | 2.52 | 2.24 | I would make the best of a teacher change. | * |


| \# | Scale value | $\begin{array}{r} \mathrm{Q} \\ \text { Value } \end{array}$ | Statements | Qualify |
| :---: | :---: | :---: | :---: | :---: |
| 23 | 2.89 | 2.72 | I would welcome changes to the band program with a new teacher. |  |
| 24 | 6.98 | 2.31 | I wouldn't want any changes made to the band program with a new teacher. | * |
| 25 | 7.47 | 2.77 | I'd have to deal with a new teacher. |  |
| 26 | 8.32 | 2.5 | If my teacher left, it wouldn't be the same band anymore. | * |
| 27 | 8.96 | 2.29 | If my teacher left, students would feel like they weren't good enough to keep him/her. | * |
| 28 | 8.67 | 2.56 | I'm afraid of change; I do not want to constantly change how we do things. |  |
| 29 | 7.31 | 3.17 | It would be difficult to replace a teacher who works with students individually and establishes a positive rapport. |  |
| 30 | 4.76 | 1.69 | It would take a while, but I would get used to a new band teacher. | * |
| 31 | 8.75 | 3.49 | My teacher is like family to me, and I would be upset if he or she decided to leave. |  |
| 32 | 6.14 | 1.15 | Nobody knows what to expect from a new teacher. | * |
| 33 | 9.93 | 2.19 | Our band program would fall apart without teacher stability. | * |
| 34 | 3.06 | 2.25 | There is always a possibility that a new teacher will bring a better result. | * |
| 35 | 8.64 | 2.32 | Things will become crazy in band. | * |
| 36 | 5.8 | 1.23 | Things will not change that much. | * |
| 37 | 4.85 | 4.28 | We need a change in this band program. |  |
| 38 | 4.16 | 2.49 | I don't think there will be any problems (conflicts) with students and a new teacher. | * |
| 39 | 8.15 | 2.26 | I think students, parents, and the new teacher will have conflicts for a few years. | * |
| 40 | 7.87 | 2.42 | I think the older students will have the most problems (conflicts) with a new teacher. | * |
| 41 | 8.79 | 2.68 | Students may feel upset about the loss of a previous teacher, and may battle the replacement. |  |
| 42 | 5.38 | 2.73 | There may be problems (conflicts) with a new teacher at first, but they will probably go away. |  |
| 43 | 3.96 | 2.51 | A new teacher may give us more freedom. |  |


| \# | Scale <br> value | $\begin{array}{r} \mathrm{Q} \\ \text { Value } \end{array}$ | Statements | Qualify |
| :---: | :---: | :---: | :---: | :---: |
| 44 | 4.9 | 3.1 | A new teacher would have higher expectations of us. |  |
| 45 | 7.34 | 2.06 | A new teacher would not expect as much from us. | * |
| 46 | 6.33 | 2.41 | If my teacher left, the program would rely more on the students. | * |
| 47 | 4.8 | 2.45 | Most likely the next teacher would be easier. | * |
| 48 | 7.26 | 1.97 | The new teacher could be more strict than our current one. | * |
| 49 | 3.67 | 2.25 | A new teacher may have more teaching experience. | * |
| 50 | 7.49 | 1.57 | A new teacher may not be as experienced as our current teacher. | * |
| 51 | 5.17 | 2.36 | I would want my new teacher to have some high school band teaching experience. | * |
| 52 | 6.01 | 2.16 | I wouldn't care about the amount of the new teachers experience in the classroom. | * |
| 53 | 8.78 | 2.1 | A teacher change would be very stressful for the program. | * |
| 54 | 5.65 | 2.25 | A teacher change would not bother me. | * |
| 55 | 8.95 | 2.52 | Band would not be as enjoyable with a new teacher. |  |
| 56 | 7.57 | 3.06 | Having a band teacher leave is hard because they are usually everyone's favorite teacher. |  |
| 57 | 8.48 | 2.24 | I would be disappointed and worried about our band's future. | * |
| 58 | 8.19 | 2.75 | I would be more upset if my current band teacher left us to go to another high school. |  |
| 59 | 7.64 | 2.12 | I would be nervous about the future of our program if our teacher decided to leave. | * |
| 60 | 7.47 | 3.08 | I would be sad if my teacher left because he/she is a very good teacher. |  |
| 61 | 8.02 | 2.35 | I would be upset if my teacher decided to leave. | * |
| 62 | 7.84 | 2.16 | I would be wary of losing band traditions. | * |
| 63 | 9.31 | 3.23 | I would feel abandoned if my teacher left. |  |
| 64 | 9.76 | 2.62 | I would feel betrayed if my current band teacher left us to go to another high school. |  |
| 65 | 7.17 | 3.62 | I would miss our old teacher. |  |


| \# | Scale value | $\begin{array}{r} \mathrm{Q} \\ \text { Value } \end{array}$ | Statements | Qualify |
| :---: | :---: | :---: | :---: | :---: |
| 66 | 5.43 | 3.14 | I would NOT be as upset if my current band teacher decided to retire. |  |
| 67 | 9.35 | 2.26 | I would not trust a new teacher coming to my school. | * |
| 68 | 6.11 | 1.65 | I wouldn't care if my current band teacher left us to go to another high school. | * |
| 69 | 9.72 | 2.68 | It is devastating to a program when a teacher leaves. |  |
| 70 | 10 | 2.74 | It's going to suck getting a new teacher. |  |
| 71 | 4.88 | 2.93 | It's hard to be upset with a teacher who leaves for a better opportunity. |  |
| 72 | 9.76 | 2.58 | I would quit band if my friends also quit band because our teacher was leaving. |  |
| 73 | 8.9 | 2.6 | My friends may quit band if our band teacher leaves the program. |  |
| 74 | 6.25 | 1.37 | I would want a new teacher to be the same gender as my current band teacher. | * |
| 75 | 5.64 | 1.63 | The new band teacher's gender makes no difference to me. | * |
| 76 | 4.93 | 2.44 | I would want to be involved in the selection process of a new band teacher. | * |
| 77 | 3.42 | 2.15 | A new teacher might make band more fun than it is now. | * |
| 78 | 3.69 | 3.29 | I would give a new teacher a chance before making any judgments on staying or leaving the program. |  |
| 79 | 6.83 | 4.26 | My current teacher has more skills and efficiency compared to any new teacher. |  |
| 80 | 8.28 | 2.07 | Our band, under a new teacher, will not be as good. | * |
| 81 | 5.57 | 2.47 | Our performance level would not change with a new teacher. | * |
| 82 | 5.95 | 1.61 | Seniors would not be affected if our current teacher leaves. | * |
| 83 | 3.53 | 2.82 | The new band teacher could be just as good as our old one. |  |
| 84 | 4 | 2.85 | A teacher change would test the real team players in the band. |  |
| 85 | 2.63 | 2.23 | I would help a new teacher try to be more successful in their first year. | * |


| \# | Scale <br> value | $\begin{array}{r} \mathrm{Q} \\ \text { Value } \end{array}$ | Statements | Qualify |
| :---: | :---: | :---: | :---: | :---: |
| 86 | 9.91 | 2.14 | I would not be helpful to a new teacher, they can figure it out on their own. | * |
| 87 | 2.94 | 3.11 | I would use a teacher change as an opportunity to become a leader in the band. |  |
| 88 | 3.04 | 2.56 | Leaders should show support of a new teacher for the benefit of the entire program. |  |
| 89 | 2.72 | 2.53 | I would be more motivated to perform better for a new teacher. |  |
| 90 | 9.58 | 2.38 | If my teacher left, I would become lazy and not work as hard anymore. | * |
| 91 | 10.17 | 2.02 | Our band program would fall apart and become undisciplined. | * |
| 92 | 8.43 | 2.11 | Students would care less and less about band if the new teacher wasn't exactly like the old one. | * |
| 93 | 8.07 | 2.06 | The new teacher may not inspire us as much as our current teacher. | * |
| 94 | 5.51 | 2.39 | With a new band teacher, my effort level would remain the same. | * |
| 95 | 1.95 | 4.01 | Band is band...I would still love playing music. |  |
| 96 | 5.27 | 3.64 | Band teachers do not change how I feel about band. |  |
| 97 | 5.12 | 3.11 | Band would always exist at my school, so a teacher change is no big deal. |  |
| 98 | 3.12 | 4.03 | It doesn't matter who our band teacher is. It's the students that make the music. |  |
| 99 | 3.13 | 3.17 | My friends and I would still be in band regardless of the teacher. |  |
| 100 | 5.62 | 2.47 | My parents would want me to stay in band, even if there is a new teacher. | * |
| 101 | 3.34 | 1.89 | A new teacher will be excited about being with a new group of students. | * |
| 102 | 7.84 | 2.91 | I don't want someone who has never taught above middle school. |  |
| 103 | 4.38 | 2.09 | I may like the new teacher more than my current teacher. | * |
| 104 | 4.18 | 2.39 | I would be happy that I got to know my teacher before they left. | * |
| 105 | 4.16 | 3.31 | My current band program is great because of reasons other than my current teacher. |  |


| \# | Scale value | $\begin{array}{r} \mathrm{Q} \\ \text { Value } \end{array}$ | Statements | Qualify |
| :---: | :---: | :---: | :---: | :---: |
| 106 | 6.25 | 6.68 | My current band teacher is irreplaceable. |  |
| 107 | 8.73 | 2.56 | Our teacher might leave because we aren't a priority in his/her life. |  |
| 108 | 8.05 | 2.12 | Students will think less of a new teacher if they were attached to their old one. | * |
| 109 | 3 | 2.43 | A new band teacher would inspire me to practice more than I do now. | * |
| 110 | 2.53 | 2.14 | A new and better band teacher can come in and teach newer and better things that didn't happen with the old teacher. | * |
| 111 | 3.63 | 2.48 | A new teacher may be better than the one we have. | * |
| 112 | 3.08 | 2.28 | A new teacher would bring a chance for us to get better. | * |
| 113 | 4.91 | 5.18 | I don't like my current teacher, so getting a new teacher would be an improvement. |  |
| 114 | 5.27 | 4.29 | I like my teacher, so I wish he/she would stay. |  |
| 115 | 10.57 | 1.96 | The band program will be ruined if our teacher leaves. | * |
| 116 | 6.29 | 5.67 | There isn't a better teacher than the one we have. |  |
| 117 | 3.66 | 2.17 | A new teacher may put more effort into our program. | * |
| 118 | 8.03 | 2.15 | A new teacher will have their own ideas, and may not listen to our traditions. | * |
| 119 | 3.26 | 2.03 | A new teacher may have a style that is a better fit to my needs. | * |
| 120 | 3.91 | 2.61 | A new teacher may teach music of different styles. |  |
| 121 | 3.68 | 2.47 | A new teacher would bring a different approach to methods of teaching and playing. | * |
| 122 | 2.82 | 2.69 | A new perspective from fresh eyes offers a broader understanding of music. |  |
| 123 | 2.63 | 2.2 | A new teacher gives the band a chance to restart with a new energy and optimism. | * |
| 124 | 3.38 | 2.12 | A new teacher might be able to teach us new things. | * |
| 125 | 2.8 | 2.3 | A new teacher will do things differently to make us even better. | * |


| \# | Scale value | $\begin{array}{r} \mathrm{Q} \\ \text { Value } \end{array}$ | Statements | Qualify |
| :---: | :---: | :---: | :---: | :---: |
| 126 | 8.67 | 3.02 | All that time and effort we put in to our program only to be left not knowing what the future will bring. |  |
| 127 | 3.82 | 1.94 | Even though I would miss my teacher, I might like a new one as much or better. | * |
| 128 | 4.48 | 2 | Getting a new teacher would not be all that bad. | * |
| 129 | 6.36 | 4.2 | Having the same teacher for four years would be boring. |  |
| 130 | 4.96 | 2.2 | Hopefully a new teacher will decide to stay. | * |
| 131 | 5.45 | 3.1 | I don't think the teacher makes any difference on my choosing to participate in band. |  |
| 132 | 4.13 | 3.25 | I think it is a good idea to have multiple band teachers during my four years of high school. |  |
| 133 | 7.07 | 2.22 | I think the transition between band teachers would be challenging. | * |
| 134 | 6.77 | 1.74 | I would have to get used to a new teacher, new rules, and new traditions. | * |
| 135 | 2.95 | 2.52 | I would like to experience a new teacher's teaching. |  |
| 136 | 6.12 | 3.37 | I would prefer to have the same band teacher for all four years of high school. |  |
| 137 | 6.04 | 1.83 | I would want to know as soon as possible that my current band teacher was leaving. | * |
| 138 | 5.93 | 1.61 | I would want to know that my band teacher was leaving as soon as he or she was ready to tell us. | * |
| 139 | 3.87 | 2.26 | I would want to tell a new teacher about the best parts of our band program before the semester began. | * |
| 140 | 2.06 | 2.58 | I'd be excited to meet a new teacher. |  |
| 141 | 8.67 | 2.74 | If our teacher leaves, I would be worried that they might not be replaced at all. |  |
| 142 | 6.03 | 1.17 | Teachers come and go, it's just another teacher. | * |
| 143 | 5.99 | 0.59 | There are both positive and negative feelings about my band teacher leaving. | * |
| 144 | 3.26 | 2.09 | There is always something new to learn from a different teacher. | * |


| $\#$ | Scale <br> value | Q Q <br> Value | Statements | Qualify |
| ---: | ---: | ---: | :--- | :--- |
| 145 | 6.52 | 2.36 | There really wouldn't be that many positive <br> things about a teacher change at first, but we <br> will get over it. | $*$ |
| 146 | 9.09 | 2.36 | There will be a bad learning environment for a <br> new teacher. | $*$ |
| 147 | 7.65 | 1.75 | Too much change isn't good. We need balance <br> and stability. | $*$ |
| 148 | 6.81 | 2.81 | We will have to teach the new teacher how we <br> do things at our school. |  |
| 149 | 7.72 | 1.78 | We're going to have a hard time getting the <br> new teacher adjusted to our system. <br> 150 | 9.06 | 2.43 | I think the Juniors wouldn't stay for their |
| :--- |
| Senior year if the teacher left. |$\quad *$|  |
| :--- |

## APPENDIX E

FINAL PHASE THREE SURVEY WITH SCALE VALUES SHOWN

## HIGH SCHOOL BAND STUDENTS' ATTITUDES TOWARD TEACHER TURNOVER

If you AGREE with the following statements, please put an " X " in the box next to the statement number. If you DISAGREE or DON'T KNOW, please leave the box blank.

| 1 | 6.05 | I don't know if a teacher change would make things better or worse. |
| :--- | ---: | :--- |
| 2 | 2.84 | A new teacher might attract more students to join band. |
| 3 | 4.76 | It would take a while, but I would get used to a new band teacher. |
| 4 | 3.66 | A new teacher may put more effort into our program. |
| 5 | 8.03 | A new teacher will have their own ideas, and may not listen to our <br> traditions. |
| 6 | 6.77 | I would have to get used to a new teacher, new rules, and new traditions. |
| 7 | 6.14 | Nobody knows what to expect from a new teacher. |
| 8 | 10.57 | The band program will be ruined if our teacher leaves. |
| 9 | 7.64 | I would be nervous about the future of our program if our teacher decided <br> to leave. |
| 10 | 3.98 | Although we were used to the old teacher, we could use some new changes. |
| 11 | 8.28 | Our band, under a new teacher, will not be as good. |
| 12 | 3.82 | Even though I would miss my teacher, I might like a new one as much or <br> better. |
| 13 | 4.48 | Getting a new teacher would not be all that bad. |
| 14 | 7.32 | Change is sometimes bad. |
| 15 | 2.52 | I would make the best of a teacher change. |
| 16 | 10.67 | If my current band teacher left, I would quit band. |
| 17 | 6.03 | Teachers come and go, it's just another teacher. |
| 18 | 9.35 | I would not trust a new teacher coming to my school. |
| 19 | 7.84 | I would be wary of losing band traditions. |
| 20 | 8.78 | A teacher change would be very stressful for the program. |
| 21 | 10.17 | Our band program would fall apart and become undisciplined. |
| 22 | 3.26 | There is always something new to learn from a different teacher. |
| 23 | 5.65 | A teacher change would not bother me. |
| 24 | 5.99 | There are both positive and negative feelings about my band teacher <br> leaving. |
| 25 | 8.48 | I would be disappointed and worried about our band's future. |
| 26 | 9.91 | I would not be helpful to a new teacher, they can figure it out on their own. |
| 27 | 5.86 | A new teacher will create both good and bad memories. |
| 28 | 5.58 | I would expect some changes to the band program, but they should try and <br> keep things the same. |
| 29 | 5.8 | Things will not change that much. |

Please Circle your:

| GENDER | GRADE LEVEL |  |
| :--- | :--- | :--- |
| Male | Freshman | Junior |
|  |  |  |
| Female | Sophomore | Senior |


| SCORE | GROUP |
| :--- | :--- |
|  |  |

Please mark an " X " in the box under Strongly Agree, Agree, Neither Agree/Disagree, Disagree, or Strongly Disagree for each statement.

|  | STRONGLY <br> AGREE | AGREE | NEITHER <br> AGREE <br> OR <br> DISAGREE | DISAGREE | STRONGLY <br> DISAGREE |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1. If my current band teacher <br> left, I would want to stay in <br> band no matter what. |  |  |  |  |  |
| 2. I would feel betrayed if my <br> current band teacher left us <br> to go to another high school. |  |  |  |  |  |
| 3. I don't think the teacher <br> makes any difference on my <br> choosing to participate in <br> band. |  |  |  |  |  |
| 4. I think it's a good idea to <br> have multiple band directors <br> during my four years in high <br> school. |  |  |  |  |  |
| 5. I would quit band if my <br> friends also quit band <br> because our teacher was <br> leaving. |  |  |  |  |  |
| 6. I would help a new teacher <br> try to be more successful in <br> their first year. |  |  |  |  |  |
| 7. I think the older students <br> will have the most problems <br> (conflicts) with a new teacher. |  |  |  |  |  |
| 8. There really wouldn't be <br> that many positive things <br> about a teacher change at <br> first, but we will get over it. |  |  |  |  |  |
| 9. A new teacher might make <br> band more fun than it is now. |  |  |  |  |  |
| 10. I would prefer to have the <br> same band teacher for all four <br> years of high school. |  |  |  |  |  |

Is there anything else you would like to tell me about how you would feel towards a band teacher turnover?

THANK YOU for participating in my study!!!!!!

## APPENDIX F

OPEN-ENDED QUESTION RESPONSES
\# Statement
1 A band teacher turnover can be either good or bad, but only time will tell how things will go. Open-mindedness is the key in director switches.
2 A new teacher means new memories, more things to learn. I believe that overall, it's beneficial to a student. A teacher can change a student's whole life. They have a lot of influence.
3 A new teacher wouldn't be good for a band that expects to do great things.
4 After my freshman year, our band got a new director. At first I didn't know what to think, but it has been a change for the better because we have been a lot more successful.

5 Bad.
6 Being a senior, I have seen multiple band teachers. It has affected me greatly, but life goes on and we are in a constant state of change.
7 Change is difficult. Each teacher has a different vision they want to make happen. Students may feel violated or highly uncomfortable with the changes, causing them to react differently.
8 Depending on the quality of the new band teacher compared to the old, the band may suffer. All these depend on who the new teacher is.
9 Disappointed
10 Don't leave your band for selfish reasons.
11 Honestly, if it wasn't for my band teacher and the way she runs her band, I most likely would have never picked up a trumpet or thought of doing so.
12 How the change affects the band will be based on the students in the program. They can choose if the outcome is good or bad. At least in situations they can control.
13 I believe students wouldn't be as respectful to the new teacher at first because we are used to the old traditions and teaching methods brought by the old director.
14 I do band for the love of music, not the director. But, I also like my director, too.
15 I don't know. I could give the new band teacher a shot. What could go wrong?
16 I don't think getting a new band director would be such a good idea because people wouldn't understand what morals to go by if their band teacher left.
17 I have had a director turnover before and it was difficult but was very helpful to me. My new director taught me things the other could not, and convinced me to stay in band when I had planned to quit.
\# Statement
18 I love my band teacher
19 I really like my band teacher because she is always pushing us to be better and make progress. I never had that in grade school and really appreciate her for what she does. It would be interesting to learn how different teacher teach in their classrooms to learn and understand new things. I would miss my band teacher very much, but I would still participate in band because music is the best thing.
20 I recently transferred, so I'm getting to know my new band teacher and I like him so far. I would be disappointed, but not as much as other students.
21 I think after you've had the same band teacher for a while, changing it would make things harder for the older band members.
22 I think it might be strange but it would take some getting used to. Things wouldn't be the same.
23 I think that would suck, but stuff like that happens to a lot of bands.
24 I would be scared to have a lesser experienced teacher as well as one who isn't as dedicated to band.

25 I would be very saddened because I have learned to love and respect my current band teacher. I would seriously hate it if she left.
26 I would feel hurt, angry, scared even. But at the same time, I would try to give the new teacher a chance.
27 I would feel upset for a time, but I would eventually get over it.
28 I would feel weird because I am used to my teacher.
29 I would feel worried because I know we would lose many players and the new band would change things that don't need to be changed.
30 I would hate it because you have to get used to another teacher.
31 I would miss her very much, because her teaching style helps me a lot. She encourages me to be a better musician and that makes me feel better about myself.
32 I would not like a new band teacher. Our teacher now is really great and knows what she is doing.
33 I would only feel that things would probably change and there would be some conflict, especially if they want to change traditions.
34 I would prefer that the same teacher stays here.
35 I would prefer to have the same, but I would make the best of it if it happened.
36 I would want to see how the new teacher is before I make my final decision to participate the next year.
\# Statement
37 I wouldn't enjoy the teacher turnover, but I would be able to handle it after some time.

38 I wouldn't like a band teacher turnover because: 1. It will never be the same band again. 2. I may not like the new teacher. 3. And I'll miss my teacher. 4. My older sister had 2 teachers in one year... and it was a disaster. It would probably be like that. 5 . Some kids wouldn't listen to them.
39 I wouldn't like it because I think it's better to have a bond with a teacher for 4 years.
40 If a new teacher came, I don't think I would do band anymore.
41 If my band teacher is willing to go to a different school/quit, I would support him.
42 If my teacher left, I would feel like there is no more band. It won't feel the same.
43 If not prepared for, it can ruin a program until students in the old program have completely left. If prepared for, it can be much simpler.
44 If the band teacher was to leave and a new teacher was put in their place, it would be a big change that everyone would have to adapt to. Whether they like it or not.
45 If the new teacher was o.k., it wouldn't be so bad.
46 If the teacher knows what he/she is doing, it can be a great experience!
47 If we had a new band teacher come in, they would have big shoes to fill.
48 If we switch band teachers it would be hard. I think of my teacher as a second mother.

49 I'm a freshman. I don't know how it used to be.
50 It depends on if the new teacher knows what they are doing or not.
51 It is an opportunity for students to learn how to positively deal with change, something everyone should expect throughout life.
52 It just won't be the same.
53 It might be less stressful with a new teacher.
54 It opens new experiences that will mainly be positive towards the program
55 It wasn't as bad as I thought it would be.
56 It will not be the same type of relationship between the student and teacher. Right now we respect and trust our teacher as a friend and instructor. That takes time. It's not something that happens overnight.
57 It would be band.
58 It would be different because you are used to the fun and exciting traditions before and you will miss them. Change is hard for everyone. I would still try my best to help the new person out, though.
\# Statement
59 It would be fine as long as they knew what they were doing as a conductor.
60 It would be much different depending on the teacher
61 It would change a little bit how we feel about band and our family now that the important part would be gone.

62 It would make things weird and stressful.
63 It would really have an effect, especially to those who love the current band teacher.
64 It would suck!
65 It would suck! With this teacher, we have all been brought together. A new teacher may be unable to do that.
66 It would take away all of the progress we've had.
67 It's annoying because they all have new marching styles and we have to start all over again. Our overall marching season is average.
68 It's hard to make that transition from one teacher to the next. Especially having one for three whole years, then getting a new one.
69 It's kind of tough for the students to adjust to the teacher's personality and vise versa.
70 Many of these answers depend on the new teacher coming in.
71 Many students don't like having teachers turn over because a student creates a bond with the teacher.
72 More teachers mean more experience. However, it's sad to have a teacher leave.
73 My band teacher is as good as it gets. I've had 5 different band teachers. I know.
74 Nice to see other different points of view, but it would be nice to stay the same for a little longer.
75 No new band teacher! I would miss him.
76 No new teacher!
77 Our school just had one, and it is a much better program now.
78 Personally, a band teacher turnover rate of maybe one every ten years or so wouldn't hold as many negative side effects that having three different teachers in four years. It makes the students practically unwilling to trust the teacher and creates tons of stress for the student leadership and upperclassmen.
79 The band teacher we have now is outstanding! If she left, a lot of people would be sad.
\# Statement
80 The experience gained from multiple perspectives on a single subject, music, may benefit the students as a musician in the long run, but not all teachers have effective methods to teach or to meet the sundry student needs and yearning form information and help.
81 The students choose what will happen. A band program will fail because of students - not a director change.
82 There are always positive things to come.
83 We're like a family and the director is the key element. Take him away and it all falls apart.

84 You become attached to your band teacher over the years and someone else suddenly replacing that is not the best thing for the band.

## APPENDIX G

## IRB ACCEPTANCE



The above-referenced protocol was approved following expedited review by the institutional Review Board.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date. You may not continue any research activity beyond the expiration date without approval by the Institutional Review Board.

Adverse Reactions: If any untoward incidents or severe reactions should develop as a result of this study, you are required to notify the Soc Beh IRB immediately. If necessary a member of the IRB will be assigned to look into the matter. If the problem is serious, approval may be withdrawn pending IRB review.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, or the investigators, please communicate your requested changes to the Soc Beh IRB. The new procedure is not to be initiated until the IRB approval has been given.

| Office of Research Integrity and Assurance |  |
| :---: | :---: |
| To: | Jill Sullivan MUSIC BUIL |
| From: | Mark Roosa, Chair $S m$ Soc Beh IRB |
| Date: | 02/16/2011 |
| Committee Action: | Amendment to Approved Protocol |
| Approval Date: | 02/16/2011 |
| Review Type: | Expedited F12 |
| IRB Protocol \#: | 1009005514 |
| Study Title: | High School Band Student Attitudes Toward Teacher Turnover |
| Expiration Date: | 09/26/2011 |
| The amendment to th Institutional Review B required. It is the Prin research before the exp any sort may not cont for continuation before on the expiration date. reported or published the study termination. | e-referenced protocol has been APPROVED following Expedited Review by the This approval does not replace any departmental or other approvals that may be nvestigator's responsibility to obtain review and continued approval of ongoing n noted above. Please allow sufficient time for reapproval. Research activity of eyond the expiration date without committee approval. Failure to receive approval xpiration date will result in the automatic suspension of the approval of this protocol mation collected following suspension is unapproved research and cannot be earch data. If you do not wish continued approval, please notify the Committee of |

This approval by the Soc Beh IRB does not replace or supersede any departmental or oversight committee review that may be required by institutional policy.

Adverse Reactions: If any untoward incidents or severe reactions should develop as a result of this study, you are required to notify the Soc Beh IRB immediately. If necessary a member of the IRB will be assigned to look into the matter. If the problem is serious, approval may be withdrawn pending IRB review.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, or the investigators, please communicate your requested changes to the Soc Beh IRB. The new procedure is not to be initiated until the IRB approval has been given.

Please retain a copy of this letter with your approved protocol.


[^0]:    ${ }^{1}$ Differences of opinion exist on the matter of selecting judges. Thurstone was unclear as to what qualifications these judges should have. Some researchers have used "experts" (Rainey, 2002), while other researchers believe that the statements should be judged by a sample of the same population being studied (Edwards, 1957; Trochim, 2006).

[^1]:    ${ }^{2}$ www.aiaonline.org Accessed February 28, 2011

[^2]:    ${ }^{3}$ www.random.org Accessed October 1, 2010.

[^3]:    ${ }^{4}$ www.random.org Accessed January 15, 2011.

