Alternative Music Courses and Student Motivation

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David Martin Rolandson

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Dr. Keitha Lucas Hamann, Advisor

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ABSTRACT
Alternative Music Courses and Student Motivation
David Martin Rolandson
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Although music plays an important role in the lives of adolescents, the majority of high school students in the United States do not participate in the large performance ensembles traditionally offered in schools (Elpus, 2014; Elpus & Abril, 2011; Stewart, 1991). Researchers have suggested that changes to the high school music curriculum, mainly through the inclusion of alternative music courses (e.g., popular music) and musical genres more relevant to students, would "encourage more…music study" (Hope, 2004, p. 3) in schools. The purpose of this study was to determine whether students who elect alternative music courses were influenced to study music by different motivational factors than traditional large ensemble participants and whether sex influenced participation in alternative music classes. A *Musical Motivation Questionnaire* was distributed to all music students attending six high schools in Minnesota. Principal components analysis and reliability testing identified the presence of eight motivational factors that influenced students' choices to participate in high school music courses. Results from subsequent statistical analyses revealed that these factors influenced students enrolled in alternative music courses differently than large ensemble participants, influenced female students differently than male students, and that male students were more likely to participate in alternative music courses than female students. These findings suggest that expanding curricula to include alternative music courses may motivate a new or different population of students to engage in the music learning opportunities offered in high schools.

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CHAPTER ONE: INTRODUCTION TO THE STUDY

Music is of great importance in the lives of adolescents, whether they are

performing, creating, or simply listening to music (Campbell, 2009; North, Hargreaves,

& O'Neill, 2000; Roberts & Henriksen, 1990; Williams, 2011). What seems puzzling is

that, despite the central role music plays in teenagers' lives, few high school students

elect to study music in schools (Shuler, 2011; Williams, 2011). Music teachers have had

to confront the reality that students today may not be interested in engaging in the

musical experiences being offered in school settings (Jorgensen, 2010).

For students who love music and who wish to take music courses in high school,

traditional large ensemble courses (e.g., band, choir, orchestra, jazz ensemble) are the

most commonly offered curricular musical outlets available (Abril & Gault, 2008;

Stewart, 1991). This model of instruction has changed very little since its inclusion in

schools during the early part of the 20th century. This may be partly due to the pride

music educators take in contributing to a long-established tradition of large ensemble

performance excellence. After all, the quality and technical proficiency of large

performing groups is considered by many to be music educators' "single greatest

accomplishment" (Williams, 2007, p. 20). It seems equally likely that the music

education profession's inability to evolve is due in part to waning financial support for

curricular arts programs. Schools are in the business of educating students, and large

performing ensembles provide quality music learning experiences at a very low cost per

student (Shuler, 2011).

Society is very different than it was when large ensembles became the

predominant form of music instruction in secondary schools. The ways in which people

experience and engage with music are continually changing (Kratus, 2007). In most

schools, curricular music offerings often fail to reflect students' musical interests outside

of school. The majority of high school students exhibit a lack of interest in curricular

music offerings because these courses lack relevance in their lives and fail to reflect the

music of local cultures and ethnicities (Hope, 2004). There are simply few curricular

options for students outside of band, choir, and orchestra programs to get the musical

support and instruction they need or desire. As a result, numerous young musicians walk

the halls of high schools having learned music by experimenting, using technology,

imitating other musicians, and mimicking recordings of their favorite artists (Kuzmich,

1991). "Many eventually play in bands [or other popular music groups] and some may

even become professional performers—all without the aid of a school music educator"

(p. 51).

In recent years, this realization has led to increased discussion among music

educators and other scholars surrounding the need for "approaches [to music education]

that increase access to music for public school students" (Miksza, 2013, p. 45).

Promising signs of change have evolved from these discussions, and courses in popular

music, song writing, world music, and music technology (among others) have begun to

emerge in school music curricula across the United States (Abril & Gault, 2008).

Subsequently, an increasing number of studies on alternative approaches to music

teaching and learning have been published in recent years, each listing potential

implications and recommendations for the future directions of music education (Abramo,

2010; Allsup, 2011; Cohen & Roudabush, 2010; Kuzmich, 1991; Tobias, 2010).

However, many of these studies are qualitative in nature and describe isolated cases of

teachers, classrooms, and students engaging in alternative approaches to music education. While qualitative research often provides data that is far richer and descriptive than quantitative data, "case studies by their very nature are bound by place and time and therefore…readers are privy to a snapshot of the musical engagement and learning of a small set of students" (Tobias, 2010, p. 553). Music educators can certainly learn a lot from a single "snapshot," but we need many more pictures, some much larger in size, to more completely capture the entire story.

It seems natural to posit that changes to the high school music curriculum, mainly through the inclusion of alternative music courses and musical genres more relevant to students, would "encourage more...music study" (Hope, 2004, p. 3) in schools. However, there is little empirical evidence supporting this idea. Enjoying music recreationally and discussing music with one's friends takes little effort. Regardless of the genre or course content, the study of music in schools requires "time-on-task…[and] a personal investment in learning material and techniques that one did not previously know" (p. 3). As music educators continue to invest valuable time, energy, and resources on curricular reform, it becomes important to examine whether and how alternative approaches to music education have been successful in increasing access to music instruction for a wider percentage of the high school student body. A necessary step in this process is to understand what motivates high school students to participate in curricular music courses. Although a large body of research exists examining music student motivation (Asmus, 1987; Asmus & Harrison, 1990; Campbell, 2009; Davidson & Borthwick, 2002; Davidson, Howe, Moore, & Sloboda, 1996; Hewitt & Allan, 2012; Lamont, Hargreaves, Marshall, & Tarrant, 2003; Ng & Hartwig, 2011; Renwick & McPherson, 2002; Schmidt,

2005), research is still needed to determine whether students who elect alternative music classes are motivated to do so for different reasons than traditional large ensemble participants.

Personal Background and Interest in this Topic

When I began working on this dissertation, it seemed both appropriate and necessary to reflect back on the long and winding journey that transpired between my adolescence and becoming a music educator. I consider myself to be a passionate and skilled music teacher. I have spent countless hours in practice rooms and rehearsal spaces honing my performance skills on the tuba. I have traveled across the country studying and refining my conducting with some of the very best, most knowledgeable, and most respected wind band directors in the profession. Through continued study, I have become well-versed in the pedagogical strategies, best practices, and philosophies of leading educators and scholars in the field of music education. Despite my quest for knowledge, extensive training, and years of practicing my craft in the classroom, many would consider the first leg of my journey (i.e., the decision to pursue music education in college) rather unconventional, given my personal experiences as an adolescent music student, as described below.

Over the years, I have gotten to know many respected music teachers, both personally and professionally. As a music teacher educator, I have taught numerous undergraduate music majors working towards becoming music teachers themselves. Through all of these interactions with colleagues and students, I have noticed a theme emerge in their reasons for pursuing music education as a career. Most music educators and future music educators had powerfully impactful and lasting school music

experiences during their adolescence. Many came from "powerhouse" high school music programs, received private music instruction, participated with success in solo/ensemble contests, participated in youth symphonies or choruses, and performed in All-State ensembles. They fully embraced what "school music" was and had such influential experiences with curricular music programs and music teachers that they chose to pursue music education as a career path.

If music education majors and music educators commonly possess these attributes and past experiences, then I am an outlier within the profession. I did not pursue music education as a vocation because I found curricular music in high school to be influential or motivational. As a high school student, I never considered becoming a band director as my true calling in life. I was actively engaged in performing, creating, and listening to music. However, very little of this musical engagement took place within the walls of my high school. I was involved in the school's concert band, jazz ensemble, and marching band, but school music as I knew it, was not truly engaging, nor did it provide the types of musical experiences about which I was passionate. I did not participate in the high school band program to learn about music or because I loved the music we performed. I was motivated to enroll in band because I had friends who were also members (although this number steadily declined each year I remained in band), because membership in the marching band allowed me to travel frequently, because I genuinely loved music in general, and because there were no courses offered in my preferred genre of music.

Like many adolescents, the music about which I was passionate—the music that was of central importance in my life—was rock and roll. Not only did I form part of my

personal identity through rock music, but it was also a medium through which I formed and maintained friendships and interacted with social groups (North & Hargreaves, 1999; Tarrant, Hargreaves, & North, 2001). To this day, I still believe that the single most important and influential musical experiences of my adolescence came as a result of buying an electric guitar and forming a rock band with like-minded friends. It was in this rock band that I got to explore creating and performing music that I loved (Campbell, 1995). There was no adult presence (e.g., music teacher) in our rehearsals. There was no one telling us when to start and stop playing or telling us what sounded right or wrong. We learned our instruments and acquired our songwriting skills at our own pace, made musical decisions both individually and democratically at times, and performed for our peers when we wanted to perform.

Like many adolescent rock musicians, I dreamed of a possible future as a rock and roll superstar. I was not under any false presumptions that my rock compositions were groundbreaking, revolutionary, or examples of musical genius. I did know, however, that even though my songs were simple—they were pleasing to the ear, creative, and interesting. I was certain that, through continued practice and rehearsal, our rock band would have a shot at making a career as musicians. After all, the media were flooded with young adult rock bands that, through determination—and very likely a streak of good fortune—"made it" as rock stars.

Near the end of my junior year in high school, for no explainable reason, several members of my rock band decided to part ways, causing my musical world to collapse around me. The disbandment of the rock group forced me to reevaluate my future. What once appeared to be a possible, maybe even probable, career path as a rock musician had

to be tabled, at least for the immediate future. I was faced with the reality that I was graduating high school in just one year, and at that point, my adult life would begin. I knew that I wanted to pursue music but was unsure about how that would work given the recent developments in my musical life. For the first time, I began to consider pursuing a degree in music in college. There were no other major areas of study that appealed to me. Unfortunately, to pursue music in higher education meant, and in most colleges still means, that I had to study classical music, not the rock music about which I was truly passionate.

I feel very fortunate that I happened to be in high school band and possessed performance skills on a classical instrument. After beginning college as a music education major, I quickly fell in love with classical music making and teaching children. My "fallback plan" of being a music educator suddenly turned into a viable career path, a career path in which I have become more invested and about which I have become more passionate as each year passes. I am indeed fortunate that I was able to pursue a career that I love, but the inquisitive side of me wonders how might my life have turned out had I not been a high school band member with classical training? What happens to high school rock musicians who do not possess classical music skills to fall back on? What if students had curricular opportunities to pursue their own, diverse musical interests in high school? I am confident that if I had had opportunities in high school and college to study rock music academically, my life would have turned out very differently.

High School Music Enrollment

Roughly 91% to 98% of secondary schools in the Unites States offer some form of music instruction taught by a music specialist (Abril & Gault, 2008; Parsad &

Spiegelman, 2012). However, only 18% of these high schools require students to take a music course (Abril & Gault, 2008). During the 2008-2009 school year, approximately 46% of high schools offered five or more separate music classes (Parsad & Spiegelman, 2012). Music course offerings varied, but the most frequently offered music classes were band, choir, jazz/rock ensemble, general music, orchestra, and music theory. Guitar instruction, piano/keyboard courses, music technology, composition, and mariachi ensemble were offered far less frequently than traditional large ensemble courses (Abril & Gault, 2008).

Some scholars have suggested that high school music has become so disconnected from students' musical interests that music enrollment has begun declining at an unprecedented rate (Kratus, 2007; Williams, 2011). However, a closer look at the empirical evidence suggests that this may not be the case. In 1982, approximately 30.5% of all high school seniors in the United States had enrolled in some type of music course while in high school (Stewart, 1991). Twenty-five years later, Elpus (2014) reported that high school music enrollment remained relatively stable between 1982 and 2009 at around a 30% participation rate. Although some may view this stability as cause for celebration, this means that at least 70% of high school students still choose to avoid curricular music instruction.

Alternative Music Course Offerings

If students have varying interests in music, many of which involve engagement with musical styles not offered in school curricula, then perhaps diversifying the musical course offerings in schools is needed to appeal to and to retain a broader range of music participants. Recommendations calling for the diversification of the school music

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curriculum are by no means a new development among music educators. Following the publication of the *Documentary Report of the Tanglewood Symposium* (Choate, 1968), the National Association for Music Education (NAfME), formerly the Music Educators National Conference (MENC), set goals for the music education profession moving forward to "carry out comprehensive music programs in all schools, to involve persons of all ages in learning music,…and to use the most effective music education techniques and resources" (Mark, 1999, p.6) available. As these goals were further defined, MENC suggested that teachers needed to better identify musical behaviors relevant to students' needs, and therefore, schools needed to expand programs and curricular offerings to secure greater involvement and commitment from students. MENC reemphasized the need to include diverse styles and genres of music in schools when the National Standards for Arts Education were published in 1994 (Isbell, 2007).

Beginning nearly two decades ago, researchers in the United States and abroad began venturing away from schools to examine the musical learning that takes place in informal (non-school) settings by popular musicians (Campbell, 1995; Folkestad, 2006; Green, 2002). What researchers have learned only reinforced scholars' recommendations for changes to music education in the United States. Researchers have suggested that like popular musicians, music teachers should consider allowing students to absorb music from recordings, and teachers should listen to and imitate recordings with students to help them draw connections between the musical skills and knowledge they acquired informally and new musical content (Green, 2002). However, if this is done through the inclusion of popular music in the curriculum, teachers' efforts must extend beyond simply listening to examples in music appreciation classes. By doing so, students are

only passively listening to popular music and not engaged in creative processes (Campbell, 1995). Teachers who understand that adolescents "seek to learn the performance skills of their preferred music" (Campbell, 1995, p. 20) and who provide those music learning opportunities within their classrooms are more likely to minimize the attrition observed in many school music programs.

Researchers have shown that, when taught in an "authentic manner" (Woody, 2007, p. 34), popular music courses and other alternative approaches to music education (including world music ensembles, informal music learning, music technology, electronic composition, and music recording classes) may lead to increased student interest in and engagement with music (Abramo, 2010; Allsup, 2003; Allsup, 2011; Cohen & Roudabush, 2010; Newsom, 1998; Tobias, 2010). In fact, students in alternative music courses have expressed the belief that the skills they obtained had implications "in their future lives as musicians" (Tobias, 2010, p. 532), and learning about music relevant to their lives can have a strong influence on their motivation to engage with music (Newsom, 1998). Through thoughtful pedagogical design, music teachers can use alternative approaches to music education to help students discover and understand musical patterns, tonality, form, rhythm, melody, harmony, musical imagery, and technique (Abramo, 2010).

Clearly, students enrolled in alternative music classes can have meaningful and lasting music learning experiences. These experiences can even contribute to lifelong music engagement. What remains unclear is how successful alternative music courses have been in attracting new students to high school music programs. Ultimately, students often must choose to enroll in an alternative music course over a plethora of other

elective music and non-music course options. This decision is directly guided by human motivation.

Motivation

Human behavior and motivation have long been areas of scholarly inquiry in the fields of cognitive psychology, social psychology, behavioral psychology, educational psychology, and sports psychology (Zoglowek & Aleksandrovich, 2013). This is not surprising considering that "humans are clearly motivated, goal-directed creatures. They seek out specific ends, ranging from concrete goals such as obtaining food and shelter to abstract ones such as developing a sense of meaning or attaining aesthetic ideals" (Ryan, 2012, p. 3). Motivation, or rather its root word motive, was originally derived from the Latin term *motivum* which translates to "that which moves or initiates motion" (Higgins, 2012, p. 22). Early theories of motivation embodied this concept of energy initiating motion. Sigmund Freud (1856-1939) theorized that humans possess reservoirs of "instinctual energy" (Higgins, 2012, p. 19) seeking to discharge through fueling their lives' pursuits. The father of modern social psychology Kurt Lewin (1890-1947) theorized that motivation was best explained by tension and release. He suggested that by setting goals, people create an internal tension that drives them towards reaching their objectives. Once a goal is reached, people are rewarded with the release of tension.

Much has been learned since Freud and Lewin first theorized about motivation in the early 20th century. What has become apparent is that no single theory of human motivation applies to all people. Although the root word "motive" would imply some time of movement or action, motivation does not always involve movement. For example, one of the strongest motivational forces humans must confront is fear, and fear

can often render humans motionless (Higgins, 2012). Additionally, while motivation involves both the amount of energy and the source of energy needed to perform a task, it can also be used to explain how strongly individuals are engaged in what they are doing. However, sometimes the amount of effort and energy individuals expend on tasks or activities decreases as they become more engaged in those activities. For example, Csikszentmihalyi (1990) used "flow theory" to explain how people can be highly motivated and engaged in an activity, yet participating in or completing that activity seems effortless. Motivation can be "explicit and conscious; at other times behavior is clearly energized and directed by subconscious, implicit aims and attitudes" (Ryan, 2012, p. 3). In addition, motivation is easily depleted and quite susceptible to numerous distractions (Ryan, 2012). Motivation can be derived from both intrinsic and extrinsic motivators, and the quality of those sources (e.g., hope vs. fear) can have very different impacts on human action (Higgins, 2012).

What has been established is that motivational factors are vast in number and diverse in composition. Ultimately, the essential component present in all motivational theories is human preference. Humans make choices that reflect multiple levels of preference interacting with each other. These preferences first direct human choices and then guide human actions. This becomes evident when people are motivated to select one course of action over others and sustain those actions over time (Higgins, 2012; Ryan, 2012). People choose their preferred actions (i.e., start, stop, avoid, engage) when they could have behaved in different ways (Higgins, 2012). Motivation is unique to different groups and individuals. This uniqueness and individuality of motivational factors is perhaps best summed up by the following analogy: "We don't put general, all-

purpose fuel in a car. We put some particular type of fuel in a particular kind of car…Putting unleaded fuel in a car with a diesel engine will stop the car in its tracks" (Higgins, 2012, p. 21). In this analogy, we humans are the cars, and the fuel represents the unique combination of motivational factors that guide our choices and actions through our daily lives.

Motivation to Participate in Curricular Music

Student motivation to participate in curricular music programs has interested researchers and music educators for decades. Although 92% to 94% of elementary school students in the United States receive weekly music instruction in schools (Abril & Gault, 2008; Parsad & Spiegelman, 2012), after they leave elementary school, the majority of students only receive music instruction if they are "motivated to choose elective music courses" (Werpy, 1995, p. 4). Motivation is quite complex, and rarely is a single influence responsible for humans' choices (Ryan, 2012). In music, motivation is not only at work when students choose to participate in or to avoid musical activities, but it also impacts how intensely they engage with music, how long they sustain that engagement, and the overall quality of the engagement (Smith, 2011).

According to Smith (2011), multiple strands of influence converge and fuel a person's motivation to learn, engage with, and participate in music. Several of these influences would be classified as long-term influences because they originate from or develop at a young age and influence motivation over a long period of time. Many of these influences come from external sources. For example, a person's motivation in music is influenced by the presence (or absence) of supportive musical models at a young age. Parents or caregivers serve as the most influential music models because they

demonstrate musical behaviors by singing to their children, create musically supportive home environments by listening to recorded music and helping children learn songs (Brand, 1986; Custodero, Britto, & Brooks-Gunn, 2003), provide access to musical instruments (Howe, Davidson, Moore, & Sloboda, 1995), monitor or supervise practice, provide transportation to and from music lessons, and communicate with a child's music teachers (Sloboda & Howe, 1991).

Other long-term influences are classified "intraindividual" (Smith, 2011, p. 271) because they originate from within a person. These influences ultimately contribute to and nurture enduring attitudes toward and beliefs about music learning, and they act as foundational building blocks for sustained motivation to engage in music learning and music making over time. For example, as students grow older, their previous musical experiences directly impact their conceptions of musical ability and their attributions of musical success and failure (Smith, 2011). Many people commonly misconceive musical ability as a genetic or inherited quality. In other words, they consider musical ability to be something that people either have or do not have, and this was predetermined at birth. Researchers have shown that people with little musical training or experience are most commonly those who view musical ability in this manner (Hallam & Shaw, 2002). However, once students begin receiving musical training and acquiring musical skills, they often describe musical ability as something one acquires through an ongoing process of learning, practicing, and working with other musicians (Hallam & Prince, 2003). Musicians who view musical ability and success as an ongoing process of musical improvement are often more motivated to keep learning and working towards their musical goals (Asmus, 1986; Asmus & Harrison, 1990; Austin & Vispoel, 1992). In

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other words, because they attribute their success to hard work and practice, students become motivated to continue learning and refining their musical skills.

Students are also consistently confronted with various situational influences that impact their motivation to learn and to participate in music (Smith, 2011). Like long-term influences, these situational influences can either originate from an external source or intraindividually. One extremely powerful external situational motivational influence is social motivation. Researchers have found that students often want to participate in the same activities as their peers (Werpy, 1995). Many students associate with a particular group of friends, and that group often participates in similar activities (Tarrant, North, & Hargreaves, 2001); one such activity is participating in music. Not only does social motivation contribute to students' initial decisions to participate in music, but it also acts as one of the most influential factors contributing to continued participation and involvement in music learning activities (Hewitt & Allan, 2012). The specific music course content and musical tasks in which students are asked to engage can also act as external situational motivational influences (Smith, 2011). Green and Hale (2011) found that, when students are simply asked to practice or rehearse the same musical work[s] repeatedly for extended periods of time, their motivation often decreased. However, when music teachers utilized strategies to deepen students' understanding of and appreciation for the music, students' motivation often flourished.

Finally, intraindividual situational influences may have the strongest impact on music student motivation (Smith, 2011). For example, researchers have demonstrated that the value people place on tasks directly impacts their motivation to engage in those tasks (Wigfield & Eccles, 2000). Students who actively participate in music making or

creation perceive different rewards and outcomes from musical experiences depending

on the role music plays in their lives. Therefore, different music students will sustain

costs (e.g., time, effort, practice) over benefits (e.g., enjoyment, skill acquisition, social

interaction) for different lengths of time depending on the task value they assign to the

musical activities in which they are asked to engage, and no single music course can meet

the musical needs of all types of music participants (Gates, 1991). A student's overall

affective state can be an equally strong and constantly changing intraindividual

situational influence (Smith, 2011). Even the most dedicated and motivated music

students are impacted by recollections of past musical experiences, emotions, attitude,

and arousal. It is not uncommon for musicians who had negative performing experiences

(e.g., got lost during a solo) to experience performance anxiety. Despite hard work and

meticulous preparation, performance anxiety can overwhelm a musician in the moment.

Such negative feelings and fears of possible future failures can negatively impact a

student's motivation to engage in similar music experiences.

Chapter One Summary

In most high schools across the United States, students have access to quality

music learning experiences through large performance ensemble courses. In their 2011-

2016 strategic plan, the National Association for Music Education (NAfME) established

a professional goal "to advance music education by encouraging the study and making of

music by all" (National Association for Music Education, 2011, p. 2). If this is truly a

goal of the music education profession in the United States, music educators have been

unsuccessful. Approximately 70% of high school students still never take a music course

once doing so becomes optional or elective.

Courses that deviate from the traditional large ensemble model of music instruction have begun emerging in high schools across the United States. In some instances, this curricular reform has resulted from music teachers' fears of student attrition in school music programs. Other music educators have modified the curriculum to provide more meaningful and relevant music learning experiences to students. As attempts to diversify the music curriculum appear to be gaining momentum in American schools, it becomes important to take stock of these initial efforts. Are alternative music courses truly attracting new students to the rigorous study of music? Without conducting a longitudinal study or having open access to a large number of student transcripts, it is hard to know for certain. It is also difficult to know how many students were attracted to the content of alternative music courses and how many were simply selected—or were placed in—such a course to fulfill a fine arts graduation requirement. With this in mind, a transcript study may provide an unreliable picture of the true effectiveness of alternative music courses. A more important question seems to be: How do students make the decision to enroll in alternative music courses? In other words, what motivates students to enroll in alternative music courses? Despite the abundance of research examining motivation in music, scholars have yet to explore the motivation of this growing population of music students.

Purpose for Study

The purpose of this study was to determine whether students who elect alternative music classes were influenced by different motivational factors than traditional large ensemble participants, whether influential motivational factors differed by sex, and

whether sex influenced participation in alternative music classes. The research

questions used for this study were:

Research Question One: What motivational factors influence high school

students' choices to enroll in and sustain participation in curricular music

courses?

Research Question Two: Do the motivational factors cited by students in

alternative music courses differ significantly from students enrolled in traditional

large ensemble courses?

Research Question Three: Do the motivational factors cited by students differ

significantly by sex?

Research Question Four: Are students' motivations to participate in school

music impacted by an interaction between music course enrollment and sex?

Research Question Five: Are male or female students more likely to participate

in alternative music classes?

To answer these research questions, I distributed a self-created motivation

measurement tool, the *Musical Motivation Questionnaire* (MMQ), to all students enrolled

in curricular music courses in a purposefully selected sample (Creswell, 2014) of six high

schools. After providing sex, age, and course enrollment information, participants

responded to 60 music motivation statements using six-point Likert-type Scales (1 =

strong disagree; 6 = strongly agree). Each MMQ statement was adapted from previously

established, reliable measures of motivation in music (Asmus & Harrison, 1990;

Campbell, 2009; Schmidt, 2005; Svengalis, 1978). Analysis of the data included

descriptive statistics, the use of a principal components analysis (PCA) to reduce the

motivational statements into a smaller number of related variables, a factorial

multivariate analysis of variance (MANOVA) to determine whether differences existed

between the mean motivational factor scores of different sampled groups of participants,

and a chi-square test for independence to determine whether male or female participants

were more likely to enroll in alternative music courses.

Definition of Terms

- **Alternative music course** – any elective music course that does not qualify as a traditional large instrumental or choral ensemble and that attempts to engage students in modern or popular music, world music(s), music technology, non-conventional instruments, and/or popular music instruments (e.g., guitar class, mariachi, garage band, electronic music, songwriting and composition, music production, etc.)

- **Curricular music course** – any school music class in which students enroll and earn academic credit

- **Large instrumental ensemble** – any form of traditionally offered music course in which students perform on classical wind, string, or percussion instruments (e.g., concert bands, symphony orchestras, chamber orchestras, marching and pep bands, jazz ensembles, drumlines, etc.)

- **Large vocal ensemble** – any form of traditionally offered music course in which students sing and perform as a vocal ensemble (e.g., concert choirs, men's choirs, women's choirs, chamber choirs, jazz choirs)

- **MMQ –** Musical Motivation Questionnaire which was completed by all participants in the present study

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- **Motivational factors** – MMQ motivation variables grouped together by factor loading after conducting a Principal Components Analysis (PCA)

- **Motivation variables** – all motivation statements included on the MMQ

CHAPTER TWO: REVIEW OF RELATED LITERATURE

In this review of related literature, I will discuss three independent strands of research that conceptually and empirically inform the need for this study. These strands, when woven together, provide a framework for understanding the enrollment choices secondary students make when presented with music course elective options. This chapter first briefly outlines the salient historical events and developments that contributed to the current state of high school music education in the United States. An overview of recent efforts to expand secondary school music curricula follows, including some of the perceived and observed effects of alternative music course integration. The chapter concludes with a review of the literature specifically focused on the different influences that impact motivation to engage in curricular musical activities and learning.

Historical Overview of High School Music Education in the United States

Beginning in 2007, the National Association for Music Education (formerly the Music Educators National Conference) published several provocative articles in the widely distributed *Music Educators Journal* in which scholars expressed concern over the current state and the future of secondary school music programs in the United States (see Kratus, 2007; Williams 2007; Williams 2011). In general, the authors of these articles claimed that music education in secondary schools had experienced little change over the past century, that students are no longer interested in school music programs, and that secondary school music enrollment has begun declining at an unprecedented and alarming rate. Although researchers have found evidence that contradicts claims of declining high school music enrollment nationwide (Elpus, 2014), it is true that curricular

music instruction has changed very little since high schools became more widespread following the American Civil War (Mark & Gary, 2007).

As high schools began to open across the United States in the late 1860's, most offered vocal music from the onset (Mark & Gary, 2007). It took several years for instrumental music to find a place in the school curriculum. According to Keene (2009), 1900 is roughly the year that "instrumental music developed a foothold in the public schools" (p. 287). Orchestras were the first instrumental groups added to school curricula because people in the United States hoped to develop professional orchestras that rivaled the great orchestras in Europe (Mark & Gary, 2007). To do this, they believed that instrumental instruction and training needed to occur regularly in young students' lives. Concert bands experienced widespread inclusion in public schools by 1920 (Keene, 2009), but not as a means of training future professional musicians (Mark & Gary, 2007). Instead, school bands were viewed as an outlet for students to emulate the entertaining musical performances of traveling professional bands and the beloved community bands that formed across the United States in the early 20th century. There were also isolated attempts to include music appreciation courses (or music appreciation as a supplement to existing courses) following the development of the phonograph and radio, but choral and instrumental musical performance remained the focus of most secondary school music programs, especially during the first half of the 20th century (Mark, 1996; Mark & Gary, 2007).

High school music changed very little during the first half of the 20th century, but general education reform, the American Civil Rights Movement, and advances in technology all acted as catalysts to changes in school music instruction during the 1960's.

Mark (1999) explained that music educators began preparing for the future of music education in the United Stated during this "time of change, progress, and turmoil" (p. 5). While some people adopt this progressive view of music changing with times and culture, in reality, the legitimacy of curricular music instruction was being strongly challenged for the first time since music's inclusion in schools. The United States became engaged in a competition with the Soviet Union to achieve scientific and academic superiority. This directly resulted in "threats to existing music programs" (Keene, 2009, p. 389). Music education leaders realized that "if music were to survive as a school subject" (p. 389), members of the profession would need to justify why students deserved access to a music education.

The first signs of change came in 1959 as a result of funding from the Ford Foundation to establish the *Young Composers Project* (YCP), later renamed the *Contemporary Music Project* in 1963. In an attempt to "cultivate taste and discrimination" (Mark, 1996, p.30) for quality contemporary music, this project provided grant money to pay composers under the age of 35 to serve as composers-in-residence in public schools systems. The YCP resulted in a number of original contemporary compositions for school music ensembles of varying ability levels. Although secondary school music still focused on large-group performance, for the first time students were actively performing contemporary music quite different from the Western classical compositions and transcriptions historically used in school music instruction.

During the summer of 1963, several of the nation's leading musicians, scholars, and music teachers participated in the *Yale Seminar of Music Education*. Participants engaged in nearly two weeks of discussion focused primarily on the public school music

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curriculum (Keene, 2009). They concluded that because developing technical skills and musicality were the primary objectives of formal music programs, music education in United States public schools largely failed to "develop the creativity, originality, and individuality needed to deal with the rapid cultural development of society" (p. 395). They believed that this focus on performance skills contributed to a population of skilled adult musicians who could not contribute musically or express musicianship on an individual level (Mark, 1996). As a result, participants recommended expanding music learning activities to include performance skills, ear training, listening, movement, and composition (Keene, 2009). Unfortunately, Yale Seminar participants lacked the power to influence widespread implementation of their recommendations.

Finally, during the summer of 1967, leaders in music education, business, industry, and government met at the *Tanglewood Symposium*. The symposium convened with the purpose of clearly defining the future direction of music education in the United States (Mark & Gary, 2007). Symposium participants realized that the narrow focus of curricular music instruction was no longer adequate for the diverse and changing society in the United States. According to Keene (2009), "it became increasingly apparent that there was too much divergence between 'school music' and what the children listened to outside school" (p. 397). Perhaps the strongest recommendations made by in the Tanglewood Symposium participants were that music should be included in the "core of the school curriculum" (Mark, 1996, p. 44), should include "music of all periods, styles, forms and cultures" (Choate, 1968, p. 139) in the curriculum, should promote life-long music-making, and should meet the musical needs of individual students in schools. For the first time, leaders in music education formally suggested that the one-size-fits-all

approach to music education in the United States was not adequately meeting the needs of all students.

As the 1960s drew to a close, the reform movement in music education had officially started. Many of the reform efforts that began during this decade were the result of leaders in the field of music education realizing that music's inclusion in the school curriculum as a legitimate and vital academic subject was tenuous at best. They also realized that the long-term vitality of curricular music education was dependent on creating music learning experiences that were relevant to and more representative of the diverse cultures across the United States. Interestingly, advocates for music education reform still cite these reasons when justifying their cause some 45 years later. This certainly brings into question how successful the music education profession has been in realizing the vision outlined in the *Tanglewood Declaration* over the past several decades.

Music Education in the Era of Education Reform

Music educators have witnessed one of the goals established by the Tanglewood Symposium become realized. The passing of the *Goals 2000: Educate America Act* in 1993 resulted in the creation national standards in math, science, language arts, history, and the arts. This was indeed landmark legislation for all arts educators (including music teachers) because for the first time, arts education was considered to be a "statutory core curricular subject" (Mark, 1996, p. 49). This accomplishment was even more impressive given the fact that the Arts were initially left out of Goals 2000 (Benedict, 2006). The *National Standards for Arts Education* outlined specific content and achievement standards for dance, music, theater, and visual arts (Consortium of National Arts

Education Associations, 1994). These standards were not a prescriptive curriculum. Curricular decisions were made at state and local levels. Instead, the National Standards described what students "should know and be able to do" (Mark, 1996, p. 49) at various benchmark grade levels and were written in a language that provided measureable student outcomes. The creators of the nine music education standards believed that by teaching to the national standards, "music educators appear to provide a united front in demonstrating that learning music is measurable, [and] therefore [a] worthwhile" (Benedict, 2006, p. 25) addition to the core school curriculum in the United States.

Perhaps the most significant and impactful educational legislation passed in recent history was *No Child Left Behind* (NCLB) in 2001. President George W. Bush pledged to make "sure every child [was] educated and that no child [would] be left behind – not one single child" (Ravitch, 2010, p. 94). NCLB mandated states to create rigorous standardized tests and through regular testing, demonstrate increased proficiency in mathematics and reading each year until 100% of students were proficient by 2014. Schools failing to meet adequate yearly progress (AYP) towards this 100% proficiency goal would be punished with "consequences of increasing severity" (Elpus, 2014, p. 62). Although NCLB reaffirmed the arts as core academic subjects, schools were (and still are) only held accountable for student achievement in math and reading. Subsequently, some schools and districts have "marginalize[d] the curricular position of the arts in an effort to ensure student success in reading and mathematics" (Gerrity, 2009, p. 80) out of fear of the consequences that accompany poor student performance. This marginalization of the arts has ultimately led to a reduction of arts instructional time, resources, and

student access to arts education in many schools across the United States (Gerrity, 2009; Rentner et al., 2005; Rentner et al., 2006; Spohn, 2008; West, 2012).

If music education truly is part of the core academic curriculum, then students should, in theory *and practice*, have the same access to music instruction as they do to tested and reported subjects. However, NCLB's punitive measures have once again marginalized the importance of music education most by reducing instructional time in and support for the arts in favor of additional reading and mathematics instruction. Therefore, it appears that although music achieved core academic status, music educators are still fighting for its acceptance as a legitimate content area in the school curriculum. As the population of the United States continues to become increasingly diverse, it would seem that including music of all periods, styles, and cultures in the curriculum to meet the musical needs of individual students is perhaps more important now than ever before. Although alternative approaches to music education have begun appearing in high schools with more frequency, it is logical to assume that ongoing education legislation (e.g., NCLB) has slowed music education reform and expansion efforts to some extent. After all, traditional large performance ensembles allow schools to offer core academic music courses at a relatively low financial cost per student (Shuler, 2011).

Present-day Profile of Secondary School Music in the United States

According to Kratus (2007) and Williams (2011), enrollment in secondary school music programs has been declining at an alarming rate because music education has failed to adapt to the changing musical interests of students. To support this argument, Williams examined longitudinal enrollment data produced by the Florida Department of Education and reported a decline in high school music participation from 16.45% in 1984

to 11.67% in 2005. While these statistics only described music participation in Florida, Williams stated, "There is little to suggest such trends are not similar in other parts of the United States" (p. 51). Kratus (2007) described an even more significant decline in music enrollment in the state of California. Kratus referenced *The Sound of Silence* (Music for All Foundation, 2004) report that used longitudinal data from the California Department of Education Demographics Unit to describe the music enrollment decline between the 1999-2000 and 2003-2004 school years. Enrollment data from these two benchmark years showed that student participation (all grade levels) in music declined by 46.5%. Over that same period of time, the total number of music teachers in California declined by 26.7%. This decline occurred at a time when California schools experienced an overall population increase of 5.8%. While these statistics are concerning, The Sound of Silence only reported data from two years. Therefore, it is unclear if the data show a gradual decline or anomalous figures. Additionally, California and Florida are individual states, and despite the disconcerting enrollment trends, one cannot assume that similar declines are occurring across the country. Large-scale empirical evidence is needed to paint a better picture of secondary school music course offerings and enrollment trends in the United States.

Stewart (1991) was one of the first researchers to investigate and construct a profile of high school music course offerings during the past several decades. Stewart hypothesized that enrollment in high school music is dependent on students' personal background characteristics, what music [and non-music] courses schools offer, and their "own proclivities to participate in learning opportunities of different types" (p. 7). To test this hypothesis, Stewart examined survey data from the nationally representative NCES

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longitudinal study titled *High School and Beyond* (HS&B). The HS&B report included

complete student transcripts that contained detailed information about the music courses

high school students elected and survey data about "experiences, attitudes, activities,

plans, motivations, and background characteristics" (p. 14). The sample used in this

study included 36 sophomores and 36 seniors randomly selected from 975 high schools

representing each region of the United States. The final sample included 8,791 students

who completed base-year (1980) and follow-up (1982) questionnaires, who were

sophomores in 1980 and seniors in 1982, and whose schools provided complete transcript

information and course offering information.

Stewart (1991) found that during the 1981-1982 school year, 90% of high schools

offered music courses. Of all sampled high schools, 80% of schools offered band; 80%

of schools offered chorus; 20% of schools offered string classes (orchestra); 30% of

schools offered music theory, composition, or musicianship classes; and 30% of schools

offered music history, music literature, or music appreciation classes. Of the students

sampled, 36% took at least one music course during their time in high school, and the

average music enrollment lasted 2.4 years. Of the sampled students, 15.7% enrolled in

band, 1.5% enrolled in strings, 16.3% enrolled in chorus, 2.3% enrolled in music theory,

and 2.9% enrolled in music history or music appreciation. Subsequent multiple

regression, logistic regression, and linear structural relations analyses revealed that prior

exposure to music lessons as an elementary or junior high school student was the major

contributor to students participating in high school music courses. Lessons are an

indicator of musical support from home, and "if parents do not encourage their children

to take lessons during elementary school, they also may not push them to be involved in

high school music" (p. 180). In addition, schools with more rigorous academic standards and higher proportions of college-bound students offered fewer opportunities for students to take music, and students were less likely to accumulate multiple years of music enrollment. This trend was most prevalent in affluent schools, private schools, and Catholic schools. Also, larger schools were more likely to offer a variety of music courses, but smaller schools were more likely to facilitate student access to the limited music courses offered. Finally, female students were far more likely to enroll in music, and minority students were equally likely to enroll in music classes as Caucasian students. Unfortunately, minority students were more likely to attend schools with limited music offerings, and this "indirectly restricted" (p. 181) minority student access to a music education.

Researchers have constructed more current representations of secondary school music course offerings across the United States. Parsad and Spiegelman (2012) examined changes in secondary school music programs during the decade between the 1999-2000 and the 2009-2010 school years. They found that the amount of secondary schools in the United States that offered music instruction increased from 90% to 91% over the first decade of the 21st century. They also found that schools with the highest concentration of students living in poverty lagged greatly behind more affluent schools in providing music learning opportunities for students. Although Parsad and Spiegelman did not provide specific information on the music courses offered or student enrollment figures, 46% of secondary schools in the 2009-2010 sample offered five or more separate music courses.

Abril and Gault (2008) provided more specific information on secondary school music offering after they surveyed a stratified random sample of 1,000 (response rate = 54%) active principals from public and private secondary schools representing the four major regions of the United States. Participants represented senior high schools (57%), middle/junior high schools (30%), and mixed grade-level (e.g., 6-12 grade) secondary schools (13%) located in rural (46%), suburban (32%), and urban (22%) areas. Abril and Gault found that 98% of the secondary schools surveyed offered some type of music course taught by a music specialist. Unfortunately, only 34% of secondary schools required students to take a music course further solidifying music's classification as an elective subject area. They found that band (93%) and chorus (88%) were the two most commonly offered music courses in secondary schools. Less commonly offered courses included jazz/rock ensemble (55%), general music (45%), orchestra (42%), music theory (40%), guitar (19%), piano/keyboard (13%), music technology (10%), composition (7%), and mariachi ensemble (5%). Individual participants also listed Caribbean ensemble, Brazilian ensemble, African drumming, bluegrass, Celtic music, musical theater, and math-as-music as music course offerings existing in their curricula.

The most accurate picture of enrollment trends in secondary school music programs can be drawn from studies that examined large-scale, transcript data (Stewart, 1991; Elpus & Abril, 2011; Elpus, 2014). Elpus and Abril (2011) constructed an updated national demographic profile of high school large ensemble students in the United States by examining data from the NCES Education Longitudinal Study that began in 2002 to provide trend data as they transition through high school and into higher education or careers. The NCES gathered data from as a nationally representative sample of 16,400

sophomore high school students. The NCES then collected follow-up data from the

majority of the sample at two-year intervals (as seniors and two years after leaving high

school). During the first follow-up, NCES collected complete high school transcripts

from 14,900 members of the sample. Elpus and Abril (2011) used a sample of 13,240

from the NCES study, and to "permit direct comparisons with Stewart's (1991) analysis

of HS&B data" (p. 133), they omitted participants from the sample who dropped out of

high school, graduated early, or who were homeschooled during the 2004 school year.

They found that in 2004, only 21% of high school seniors in the United States enrolled in

large performance ensembles (band, choir, orchestra). This "represents an almost 10%

decline in music participation as compared with Stewart's (1991) finding that 30.9% of

high school seniors in 1982 participated in music performance classes. Senior music

students in 2004 tended to be female (61.1%), come from families with a higher

socioeconomic status, have higher grade point averages than non-music students, and

were not fully representative of the diversity present in their schools. Like other scholars,

Elpus and Abril suggested that if declining enrollment proves to be a continuing trend in

the future, music educators must consider ways to draw students to their programs

through innovative and diverse course offerings.

Finally, Elpus (2014) examined data from 10 separate NCES nationally

representative high school transcript studies that occurred between 1982 and 2009. In

doing so, Elpus hoped to determine what, if any, enrollment trends existed and if those

trends were affected by the NCLB legislation. After constructing an aggregate data set

from NCES transcript studies, Elpus estimated with a 95% confidence interval, the

percentage of students during each sample year who enrolled in at least one music course

during high school, the percentages who enrolled in each grade level, and the percentages who earned multiple credits for continued music study throughout high school. Elpus found that music enrollment peaked in 1994 with 37.54% of all high school students enrolling in at least one music class during high school, but overall enrollment remained stable across all cohorts with a continued 34% participation rate. He stated that, "Just over one-third of all U.S. high school students enrolled in a music course at some point during high school" (p. 224). Additionally, less than 10% of students accrued four years of music credits. However, in 1982, only 5.43% of students acquired fours years of music credits. This increase in student retention between 1982 and 2009 was found to be statistically significant. Using an abbreviated interrupted time series design to estimate causal effects of a variable (NCLB) over time, Elpus found that NCLB had "no discernable effect on overall enrollment rates in music" (p. 228). However, NCLB may have aided in preventing Hispanic, English language learners (ELLs), and students with individual education plans (IEPs) from enrolling in music. This was perhaps due to schools responding to "consequential accountability mandates" (p. 228), as these groups of students tended to underperform their peers on standardized tests.

In summary, music instruction is available to students in approximately 90% of secondary schools in the United States. The prominent form of music education has been, and continues to be, large instrumental and choral performing ensembles, but new and diverse course offerings have begun to emerge in schools across the United States (Abril & Gault, 2008). Despite studies reporting reductions in music enrollment (Music for All Foundation, 2004; Elpus & Abril, 2011), new evidence has shown music

participation in secondary schools has remained at a relatively stable 30% (or greater)

participation rate nationwide over the past 25 years (Elpus, 2014). To what extent

diversified music curricula have contributed to stable music enrollment is still unknown,

and some might view seemingly stable enrollment as a cause for celebration. However,

music educators are still faced with the reality that roughly 70% of high school students

do not choose to engage in the musical experiences offered in American schools.

Summary of the Historical Overview of Music Education in the United States

High school music education has changed little in the United States since high

schools began opening across the country following the nation's Civil War. Change has

typically only occurred when "the prevailing musical desires of the public" (Kratus,

2007, p. 42) have also changed. For example, there is little doubt that the traveling

orchestras and bands of the late 19th and early 20th century sparked an overwhelming

excitement and demand for instrumental music instruction. Subsequently, school bands

and orchestras rose to prominence in the early 20th century. Change has also occurred

during periods of cultural unrest and reflected similar changes in American society. In

the 1960's, leaders in music education advocated for student engagement with

contemporary music, student-centered music instruction for all students, and exposure to

music of all periods, styles, and cultures. In some ways, this mirrored the cultural climate

during the Civil Rights Movement as people across the United States fought for the equal

acceptance of all races and cultures. However, a stronger catalyst for the music education

reform movement was the fear that music's place in the school curriculum would be

challenged as pressures mounted to compete academically and scientifically with the

Soviet Union. This fear has never subsided, and music educators have continued to fight

for the legitimacy of music education in the schools through a seemingly endless and continually evolving era of education reform. Even after music achieved core academic status in the school curriculum, the pressures created by high-stakes testing and the punitive measures that accompany the label of "failing school" have resulted in the continued marginalization of school music.

Once the study of music becomes elective in secondary schools, the majority of students in the United States do not pursue a music education. With limited exceptions, students wanting to pursue the study of music in high school have had to choose between traditionally classical, large performance ensembles such as band, choir, and orchestra. Some studies have suggested that secondary school music enrollment may be declining (Elpus & Abril, 2011; Music for All Foundation, 2004). However, large-scale empirical research using nationally representative data contradict these findings and suggest that music enrollment has remained at a relatively stable 30% participation rate nationwide (Elpus, 2014). While stable enrollment is a positive sign, it does not mask the fact that "too many students never obtain a music education of substance and depth" (Hope, 2004, p. 1) in American schools. If music education truly is for all students (National Association for Music Education, 2011), then the profession has failed and continues to fail in achieving this goal! Furthermore, until music education becomes something that the majority of students pursue and receive, I cannot foresee a future in which the fighting for the legitimacy of music in the schools subsides.

Alternative Approaches to Music Education in Secondary Schools

A long-standing belief among music educators and scholars is that "it is the right of every child to receive a balanced, comprehensive, sequential music education taught

by qualified music teachers" (Mark, Reimer, Lehman, Barrett, & Blakeslee, 2009, p. 9).

However, just because students have a right to a music education, that does not necessarily mean they are exercising that right, especially as music becomes an elective course offering. Large performing ensembles are the primary medium through which secondary school music education is delivered. Large ensembles (e.g., concert band, choir, orchestra, jazz ensemble) provide powerful music learning experiences for many secondary school students, but not all students are interested in what these programs have to offer. Knowing that secondary school music enrollment has remained relatively stable over the past several decades, it would seem that broadening the music curriculum is not necessary to reduce or stop student attrition in music programs. Instead, diverse course offerings that "better reflect the needs and desires of the students we serve" (p. 9) may help attract new students with different musical interests to music classrooms and help our profession move closer to the music-education-for-all vision promoted by the National Association for Music Education (National Association for Music Education, 2011).

Attempts to Expand the Secondary School Music Curriculum

An expansion of the secondary school music curriculum could, and often does, include a variety of courses that augment classical and jazz performing ensembles (e.g., music theory). However, recent curricular expansion efforts have been heavily focused on the inclusion of musical styles and genres more reflective of the music students engage in outside of school (e.g., popular music, electronic music, music from different cultures). O'Flynn (2006) suggested that identifying these musical styles and genres as vernacular music may be the most appropriate way of describing the "various types of

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amateur music-making among diverse groups in modern societies" (p. 140). I would tend to agree with O'Flynn given the ever-increasing diversity of the United States.

David McAllester, one of the visionary participants in the Tanglewood Symposium, articulated that, "The popular music of our own youth embodies high art and… cultural and aesthetic [content] that must inevitably receive serious attention…We can include [popular music] in the recognized canon of music along with our great classics and world music" (Isbell, 2007, p. 54). However, not all music educators in the United States share similar views of popular music in education settings. Mantie (2013) examined 81 popular music and education journal articles published between 1978 and 2010 in the United States and abroad. After generating a frequency list of terms and concepts from the articles, Mantie produced a list of 45 commonly used keywords and phrases. In the subsequent content analysis, Mantie found that although a limited number of scholars and authors in American journals discussed popular music education in the context of utility (improving existing practices), the majority typically focused on "issues of legitimacy and preservation [of traditional music teaching methods] as they relate to popular music" (p. 345). Conversely, non-American authors most often focused on ways that educators already using popular music in their classrooms could refine and improve their practices. In other words, there appeared to be a prevailing belief in the United States that popular music was not worthy of serious study in schools, and its inclusion into the curriculum would pose a threat to classical music courses and large performance ensembles. It is possible that such a prevalent view has slowed widespread expansion of popular music and other alternative music electives in high schools.

Despite this professional resistance, popular music education courses have begun appearing in high schools across the United States with more regularity in recent years. Unfortunately, many attempts to include popular music into the curriculum fail to reflect authentic popular music learning practices (Woody, 2007) or treat popular music as an "add-on not [as important as] the serious music-making business found in the band and choir" (Williams, 2011, p. 57). According to Woody (2007), popular music is often integrated through a "bait-and-switch" (p. 32) tactic in which music teachers use popular music as a motivational tool to lure students into activities that focus on classical music. For example, MacCluskey (1979) stated that when teachers begin lessons by teaching or discussing classical music, most students will immediately "tune it out" (p. 56). However, if a teacher begins a lesson with some form of popular music, he or she will gain the undivided attention of the students. After helping students discover the musical elements that are the focus of the lesson, a teacher could help students find the same elements in a classical composition. Although MacCluskey claimed that "this formula has been proven to have consistent success" (p. 57), such teaching methods place popular music in an inferior role, serving as a gateway to more serious study of classical music.

More recently, in an attempt to revive his struggling Colorado high school band program, Kuzmich (1991) created a concert band course. Despite the seemingly conventional label, concert band students learned guitar, bass, and drum set in addition to traditional wind band instruments. What developed was a class of self-motivated musicians who formed student-run rock bands. Kuzmich found that when concert band students were taught through conventional methods of notation reading, they quickly lost interest and subsequently quit the program. However, when he taught through aural and

visual imitation, student interest and curiosity blossomed. On the surface, this appeared to be an honest attempt to treat popular music as a legitimate course of study in the high school curriculum. However, Kuzmich then described that, as a result of his concert band, enrollment in the school's symphonic band and jazz ensemble increased, the school's small pep band evolved into a large and successful marching band, and the technical proficiency or mastery of all instrumental ensembles improved. He concluded that if music educators can find ways to include non-traditional students in the music program, their traditional class offerings will likely benefit in many ways. Once again, this demonstrated that students were being drawn into the music program through popular music and subsequently guided into traditional large performing ensembles through the "bait-and-switch" (Woody, 2007, p. 32) technique.

In music education settings, creating and performing would likely be the most authentic treatment of popular music (Woody, 2007). However, teachers often fail students in this regard as well. According to Allsup (2011), this is largely due to the fact that music teachers lack formal, hands-on experiences with popular music making. The ways that music teachers have been conditioned to control the music selection, prepare rehearsals, and delegate student contributions do not apply well to popular music settings (Woody, 2007). Teachers need to serve as musical guides who can assist when needed, but also must not abandon educational goals to appease students. Musical experiences have to be authentic and educational to be worthy of inclusion in the curriculum (Woody, 2007).

Newsom (1998) provided a first-hand account of a music teacher struggling to strike a delicate balance between educationally sound and authentic popular music

teaching and learning. Newsom designed a class that supplemented his high school's

jazz ensemble by teaching guitar, bass, and drum set players the fundamental skills

needed to participate in jazz. Over time, this course became informally known as *Garage*

Band 101 and involved students who made the choice to learn and practice popular music

under the guidance of an adult authority (the teacher). Newsom described that this

interesting classroom dynamic proved difficult because his students had been conditioned

to believe that popular music (primarily rock) was only truly authentic "when practiced in

opposition to authority" (p. 10). As a teacher, Newsom had an obligation and

responsibility to make musical learning experiences pedagogically beneficial for all

students involved. Therefore, he assigned class members to rock groups of balanced

instrumentation and similar ability levels. Ultimately, students were not receptive to this

and suggested they would prefer performing with their friends rather than working with

students they viewed as uncool. Newsom suggested that this demonstrated that young

popular musicians place greater importance on social factors than on technical ability.

Newsom also struggled with the groups' repertoire selection. He assigned students songs

that fit into the following three categories: songs chosen by students and unknown to the

teacher, songs chosen by students and approved by the teacher, and songs unfamiliar to

the students and suggested by the teacher for pedagogical and developmental reasons. As

students progressed through each of these categories, they became increasingly less

motivated and receptive to the repertoire. In other words, the more influence Newsom

had in repertoire selection, the less receptive and engaged students were in learning the

music. This demonstrated that young popular musicians believe they possess an "affinity

with their music that adults will never have, regardless of their professed or genuine

appreciation for – perhaps even understanding of – the music" (p. 17). Furthering Woody's (2007) suggestion, it is perhaps less important for music teachers to exert influence over young popular musicians than it is to help guide them towards their goals.

In order for popular music learning to be authentic, teachers must teach in a way that is "true to the real processes of vernacular music making" (Woody, 2007, p. 35). These skills include emphasizing listening and aural skills, improvisation, ear-based trial and error, and musical creativity. This means that, at times, traditionally trained music teachers will need to abandon the teacher-as-expert model of instruction and engage in learning along with their students in a cooperative manner. In other words, to be effective, popular music learning in school settings should reflect popular music making outside of school settings.

Similar issues may arise when learning the music from different cultures is treated in an inauthentic manner. For example, Abril (2010) observed one middle school teacher's efforts to provide meaningful music experiences to their growing body of Hispanic students by creating a *Mariachi Ensemble*. The music teacher was not trained in mariachi and was only vaguely familiar with mariachi music. Her mariachi classes typically included various combinations of rehearsing the music, listening to recordings, and discussing the music. Much like traditional ensembles, the teacher's primary goal was to prepare students for formal concerts and other informal performances. She would also engage students in discussions about the Mexican culture and Mexican traditions, in an attempt to help students identify more deeply with their heritage through music.

Despite her best efforts, tensions arose in the classroom. For example, the teacher programmed music that appropriately reflected the Hispanic culture. However, when

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certain pieces were performed on the school's winter (holiday) program, students and

their parents did not view the mariachi tunes as culturally appropriate. These songs

reflected the Hispanic culture, but were not representative of the Mexican holiday season.

In a separate cultural exploration unit, the music teacher asked students to take a

worksheet home and complete the answers with their parents to better learn about their

culture. However, the worksheet asked students to describe what type of clothing people

from their culture wore, and what language people from their culture spoke. What the

music teacher did not realize is that the questions she asked seemed to imply that their

culture differed in significant ways from the American culture. Hispanic families wore

similar casual clothing as Americans. They do not walk around in the traditional,

brightly colored and festive clothing represented in movies. Abril (2010) concluded by

suggesting that music teachers need to exert great care in selecting music that is meant to

reflect specific cultural groups. This can be a wonderful opportunity to use students as

resources when programming music. In addition, he suggested that teachers need to

avoid activities that label students' cultural behaviors, traditions, and attitudes "as Other"

(p. 13).

Authentic Attempts to Expand the Secondary School Music Curriculum

Many scholars and practitioners have researched and written about successful

attempts to expand secondary school music curricula through the authentic application of

vernacular music experiences (Abramo, 2010; Allsup, 2003; Resch, 2010; Savage, 2005;

Tobias, 2010). Unlike the bait-and-switch technique utilized by some music educators

(Kuzmich, 1991; MacCluskey, 1979), successful applications of popular, electronic, and

world music styles require teachers to respect the origin of the music and allow students

to learn and engage with music in ways that are representative of the music learning and engagement that takes place outside of schools. Popular musicians and musicians from different cultures do not typically learn music through formal music lessons and sequential curricular instruction. Instead, they most often engage in "informal music learning practices" (Green, 2002, p. 5). Researchers have shown that informal learning is not sequenced beforehand and typically occurs through active participation in the activity. This may include learning through group participation and interaction, aural transmission, copying recordings, observing and imitating other musicians, composing collectively, and musical experimentation, both individually and within a group setting (Campbell, 1995; Clawson, 1999; Folkestad, 2006; Green, 2002).

Allsup (2003) described a scenario in which traditional large ensembles and popular music coexisted harmoniously. Allsup suggested that formal music education lacks opportunities for students to create "new music that is culturally meaningful and self-reflective" (pp. 24-25). He sought to explore the potential of student-driven music composition. Allsup asked nine high school band students to form two independent groups and create a composition from any genre of music using any available instruments from school or home. He was not as much interested in the final product (composition) as observing the processes used during group composition. According to Allsup, choosing of a genre of music and "working with the traditions governing its creative processes [the choices associated with composing, problem-solving, and musicianship] seemed to be the largest determinant of the group's culture" (p. 30). The first group of musicians chose to abandon their band instruments and compose with an instrumentation resembling a garage band. The second group remained committed to composing with

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their primary band instruments. Allsup observed interesting differences between the two groups. The garage band often resembled a jam band in which members would play independently, ignoring the surrounding noise until one member started playing something that appealed to the group. At that time, group members would join in and jam on the composition. Conversely, the classical group established a compositional roadmap prior to playing. They discussed compositional elements such as overall form and key center or tonality. Having made several group decisions, each member composed independently at home and brought parts of the composition to rehearsal. Allsup observed little collaborative composition among the classical instrument group.

Allsup (2003) identified several benefits of the garage band model. The largest benefit was that garage band members took advantage of cooperative learning processes. In other words, they would play, discuss, critique, and work together through the entire composition process. This collaboration opened up new possibilities for the students. They made new friends, became aware of each other's music abilities and potential outside of the large-group setting, and formed small musical side-projects among members. Allsup suggested that if given time and space, band students "may break out of the roles defined for them," (p. 34) and create opportunities to do more than just contribute to the large ensemble. Allsup described this mix of garage band and traditional large-group band as a hybrid with untapped potential. Allsup concluded that if students are given opportunities to explore music "freely, to work democratically, they will create a context about which they are familiar, conversant, or curious" (p. 35).

Other researchers have focused solely on the inclusion of different musical offerings into the curriculum. In an attempt to increase music enrollment and

participation by students of varying ethnic and cultural backgrounds, Abramo (2010) inserted a guitar performance class into the high school music curriculum because the "guitar is a versatile instrument that features in many different genres of popular music" (p. 17). He carefully designed the course to avoid traditional ensemble-like learning strategies because he believed a similarly designed guitar course would not truly diversify the curriculum. Therefore, Abramo designed his course by incorporating many of recommendations made and knowledge obtained from popular music researchers (Allsup, 2003; Green, 2002; Jaffurs, 2004). Abramo described a hybrid form of instruction in which he would teach some fundamental chords (or other musical elements), and then by listening to recordings, students would tailor their learning and participation to their specific interests. All students would be performing the same song, but some would be strumming, others would be improvising solos, and some students would even transcribe solos or vocal melodies.

In addition to this form of group instruction, students were able and encouraged to create and work on their own musical projects. Abramo (2010) described this as students customizing their music learning around musical aspects that interested them. He noted that when students were given this flexibility, their motivation to learn music increased. Through this process, students experimented with other popular music instruments (e.g., bass guitar, keyboard, drums) and often formed small groups or rock bands within the class. Abramo also used portions of the class to deepen students' understanding of the music. He stated that, "for students to gain a multifaceted understanding of music and how it functions in their lives, they need to know how to listen, discover patterns, and question how music influences and is influenced by society" (p. 21). Abramo would use

music videos and recordings to engage students in cultural and theoretical analyses of different songs. He explained that once students learned chord progressions, they would begin to notice patterns, and this would evolve into discussions of form. Other students noticed how tonality changes create different moods throughout songs. Abramo concluded that, when introduced and approached correctly, popular music will not only encourage enrollment, but also offer students a "unique, valuable interaction with the musical worlds they inhabit everyday" (p. 26).

Tobias (2010) provided a rich description of the student engagement and musical learning that occurred within a high school songwriting and technology course (STC). The STC was designed to help students "develop the knowledge and skills needed to create, record, mix, and produce original songs" (p. 36). In this process, students were given access to a variety of popular music instruments and technology including *Pro Tools Software,* a full mixing board, electric instruments, amplifiers, and acoustic guitars. The STC teacher instructed the class on how to use the music technology, discussed the recording and mixing process, and addressed various technical and theoretical musical concepts. Informally, students worked together and learned from each other as they created, recorded, and produced an original song to fulfill the requirements of the course's culminating project. Contrary to the evidence Tobias gathered through ethnographic class observations, most students believed that they did not learn about music or song creation in the STC. They expressed that any knowledge they acquired was specifically related to the technological skills of recording, mixing, and producing music. The STC was successful in helping students draw direct connections between the course and the music making they were doing outside of school. In addition, STC

students believed that the skills they had obtained through the course would have implications "in their future lives as musicians" (p. 532). This study provided evidence that engagement with popular music and informal learning practices can create meaningful music experiences for students in a school setting, even when students may not be directly aware of their music learning.

Savage (2005) investigated the impact that improvements in information and communication technologies (ICT) have made on music learning. Savage was most interested in the effects of ICT on student engagement with composition. Over a two-year period of time, Savage conducted three separate case studies with different participants engaging with ICT. Through his observations, Savage noted that participants "were clearly captivated by the new sounds produced through the use of basic effects on a sound processor" (p. 171). As students created music, they were initially drawn to the effects that generated dramatic and immediately noticeable responses such as reverberation and delay. Savage also noted that participants seemed to enjoy the "exploration and discovery" (p. 171) of sounds more so than composing under formal compositional guidelines. One of Savage's most powerful observations is that technology allowed students to compose without thinking about harmony, rhythm, and melody. Instead, students were free to simply focus on the sound of the music itself.

According to Savage, similarities can be drawn between traditional compositional processes and composition with ICT. After deciding on a starting point (either self- or teacher-determined), participants would go through an important process of experimentation or "musical doodling" (p. 173). Through this process of exploration, ICT composers often encountered musical chance happenings that served as inspiration

and fueled motivation. Once participants had some musical ideas, they often began experimenting with different sounds. According to Savage, "Pupils needed an opportunity to play with and explore sounds with the new technologies being used" (p. 175). Next, the composers began organizing or gathering together all of their musical ideas and musical sounds into a comprehensive, structured piece of music. Finally, they engaged in an evaluation and revision process. Savage found that the evaluation/revision stage would often send composers back into earlier stages of musical exploration in search of the perfect ideas and sounds. Savage concluded that meaningful change in music instruction will not occur by simply adding new technologies to music classrooms. To make the learning experiences meaningful and impactful, music teachers must respect the processes and "working practices that accompany such technologies" (p. 178).

Resch (2010) described the history of the Kekionga Middle School Steel Drum Band that was implemented as an after-school, extracurricular musical group to help students build self-esteem, draw at-risk students into the school community, provide students opportunities to represent the school in public throughout the community, and "provide an excellent arena for students of different ages, cultural backgrounds, and SES [socioeconomic status] to blend into a team that works together" (p. 146). They performed traditional Caribbean Steel Pan music in addition to a number of their teacher's arrangements. The popularity of the ensemble grew, and the group became a curricular course with an extensive audition process. As a result, students exhibited a strong sense of pride after being selected to the ensemble. In addition, the teacher's strict grade-point-average policy was described as highly motivating for students. If students fell below a C average in any class, they were immediately removed from the ensemble.

Students described asserting increased effort in their other curricular classes so they would not risk getting kicked out of the Kekionga Steel Pan Ensemble. According to Resch, the ensemble provided numerous draws for students. Students were allowed to participate at no cost (they did not have to purchase an instrument), they deeply enjoyed the steel drum sound, and most appreciated the repertoire the group performed. Resch stated that some of the group's members even participated in other school music ensembles, but the majority were new students drawn to the musical possibilities the Steel Band presented.

Summary of Alternative Approaches to Music Education in Schools

Attempts to adapt and expand secondary school music curricula have been ongoing since suggested by the Tanglewood Symposium in 1967. Although an increasing number of discussions "about curricular models of music education and the need for approaches that increase [public school student] access to music" (Miksza, 2013, p. 45) have occurred over the past decade, as of 2008, high schools offering music courses that deviate from the traditional large performance model of music instruction remained among the minority (Abril & Gault, 2008). Many music teachers are reluctant to expand course offerings as they continue to fight for the preservation of the traditional, classical music education practices (Mantie, 2013). However, these practices have not been successful in reaching our profession's goal of a music-education-for-all (National Association for Music Education, 2011). Although many reform efforts have centered on the inclusion of popular music styles (Tobias, 2010), the popular music of the United States is not necessarily representative of all students' cultures. Efforts to include culturally relevant music courses (e.g., mariachi ensembles) are equally viable methods

of creating vernacular music learning experiences that students view as more relevant (Abril, 2010).

Regardless of the content, one theme consistently emerges from the related literature. Whether the courses include popular music or different cultural music styles, the music must be approached in a manner that is authentic to the music learning that happens and musical cultures that exist outside of schools (Abril, 2010). This means that students should have opportunities to explore musical interests independently and experiment with music collectively (Campbell, 1995), make independent and group musical decisions (Allsup, 2003), participate regardless of prior experience or ability level (Abramo, 2010), and relate musical experiences to musical engagement outside of school (Tobias, 2010). Vernacular musicians learn predominantly through informal methods of listening, observing, imitating, and verbal transmission (Green, 2002). While some teacher influence, guidance, or oversight is necessary within school settings, students should have opportunities to learn "their" music in the way that is authentic and representative of the music learning that occurs outside of schools. If approached in this manner, students may see connections to future engagement with music (Tobias, 2010). In addition, researchers have suggested that alternative approaches to music education may draw new students into music programs (Abramo, 2010; Abril, 2010; Dammers, 2012; Resch, 2010).

However, teachers should be wary of assuming that the curricular inclusion of vernacular music styles would be the panacea to permanently improve music enrollment figures and student engagement. There is little doubt that students are attracted to certain types of music and pushed away by others. However, to date, there is no large-scale

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empirical evidence to suggest that a dramatic overhaul of public school music programs would cause students to "flock instantly to opportunities for rigorous music study" (Hope, 2004, p. 3). Recreationally listening to, appreciating, and discussing music are significantly different than personally investing the time, effort, and dedication needed to study music in an academic setting. It is quite possible that many students avoid music courses in high schools because they lack motivation to engage in the work serious music study requires, regardless of the course content (musical style). Researchers have observed "nontraditional" (Dammers, 2012, p. 74) students enrolling in alternative music classes. However, what ultimately influenced their choices to enroll remains uncertain. Could such a decision, especially in time when students are bombarded by an abundance of course choices, be attributed solely to the course content? Understanding the influences that guide students' decisions to enroll in music elective courses may be the best way to permanently realize a music-education-for-all vision.

Motivation

Merriam-Webster's online dictionary defines motivation as "a force or influence that causes someone to do something" (Merriam-Webster's online dictionary, n.d.). Few people would argue the existence of motivation because humans are clearly "motivated, goal-directed, creatures" (Ryan, 2012, p.3). Human lives consist of a series of actions all caused by some force or influence. Eating lunch, changing the television channel, and procrastinating on homework all demonstrate the existence of motivation because humans are choosing one course of action over another. However, the question that psychologists, researchers, and educators have long tried to answer is, "what causes it" (Linnenbrink-Garcia, Maehr, & Pintrich, 2011, p. 221)?

According to Ryan (2012), there is "rarely if ever a singular cause at work" (p. 5) in human motivation. Human "actions can be depicted best as a set of determinative processes" (p. 5). To examine these determinative processes, motivation researchers have historically focused on observable behaviors, psychological processes, and the interactions between these two components of motivation. Within the category of observable behaviors, Linnebrink-Garcia et al., (2011) defined four "action patterns" (p. 216) that comprise the body of observable behavior motivation research. These four unique, yet interrelated, action patterns include choice and preference, intensity, persistence, and quality. In other words, motivation researchers have been concerned with investigating how choice and preference guide human actions, why humans engage in various activities with different levels of in intensity, why humans only persist at some activities, and what factors impact the quality of investment in human actions. While these behaviors are observable, truly understanding motivation cannot occur unless one also understands the psychological processes that guide human choices. According to Linnebrink-Garcia et al., both affect and cognition figure prominently into motivation. Motivation is largely fueled and directed by emotions, personal thoughts that guide initial actions, and subsequent thoughts that result from actions taken.

Motivation is a central component of this study because although the fine arts have obtained core academic status in the United States (Mark, 1996), high school students typically have to elect to take music over other arts (and non-arts) elective courses. In other words, for students to receive music instruction in high schools, they have to be motivated to choose music courses over other elective course offerings. According to Linnebrink-Garcia et al., (2011), "It is impossible to summarize every

particular [motivation] theory that has been proposed" (p. 221). While this is not

necessarily true, an exhaustive review of motivation research and theoretical models is

well beyond the scope of this dissertation study. Previous research studies that

investigated students' motivation to learn and engage with music are the most relevant in

establishing a background and need for the present study. Therefore, these studies will

constitute the body of motivation research used in this literature review.

<center>**Motivation to Learn and Engage with Music**</center>

In music education, motivation plays an essential role in teaching, learning, and

engagement. Initially, "some important spark needs to exist to start the fire within a

learner" (Smith, 2011, p. 265) that nurtures curiosity in music exploration, sustains

dedication and drive after musical frustrations and failures, and maintains the human

pursuit of aesthetic experiences throughout a lifetime of music making. Several

researchers (Asmus, 1994; Hallam, 2002; Smith, 2011) have synthesized the related

research on motivation in music learning. For the purposes of this literature review, I

organized the related literature using Smith's (2011) conceptual model as a guide (see

Figure 2.1). Ultimately, I chose to use Smith's model of organization because it most

closely aligned with my understanding of the dense and interwoven components that

comprise motivation. Smith's model of motivation and music learning divides influences

by two periods of time (i.e., long-term influences, situational influences) and two

contextual levels (i.e., internal, external). This model demonstrates that responses to

music learning opportunities are influenced by "past experience[s] and enduring attitudes

and abilities, as well as the immediate environment and current thoughts" (p. 266).

According to Smith, long-term influences would include role models, previous

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Figure 2.1. Smith's (2011) Conceptual Model of the Literature on Motivation and Music Learning

Long-term Influences on Motivation   Situational Influences on Motivation

Early Environment
- Models
- Opportunity to learn
- Sequential Instruction

Prior Music Achievement

Personality

Conceptions of Ability

Attributions

Reinforcement Valence

- Teacher Attributes
- Instructional Methods
- Task Attributes
- Evaluation and Feedback
- Social Motivation

Task Value
Goal Orientations
Self-efficacy
Affective State

Motivation:

Choice
Intensity
Persistence
Quality of Engagement

opportunities and experiences, personality, and attributions of success and failure among

others. Situational influences are considered to be more short-term in nature and would

include mainly environmental factors like teacher attributes, classroom environment,

teacher and peer feedback, and motivation drawn from social influences (e.g., peers,

media, etc.). Both long-term and situational influences interact with personal motivation

factors (e.g., self-efficacy, perceptions of task value, goals, etc.) and ultimately influence music students' choices "characterized by [their] intensity, duration (persistence), and quality of engagement" (p. 267).

External Long-Term Influences on Motivation: Musical Models, Early Environment, Opportunities to Learn, and Access to Sequential Instruction

Researchers have shown that peoples' interest and success in music are heavily influenced by the musical experiences they have at a young age. According to Smith (2011), the presence and nature of musical stimuli, opportunities for musical involvement, the presence and quality of musical models, the availability of sequential instruction, and reinforcing messages about the "nature and value of the musical pursuit" (p. 268) all contribute to early environmental factors that influence future motivation in music. Because most peoples' earliest experiences with and exposure to music most often occur at home, "parents play a pivotal role in their children's musical development" (McPherson, 2009, p. 91). While some home environments do "include such things as parents and siblings playing instruments" (Smith, 2011, p. 269), this is perhaps more of the exception than the norm. According to Woody (2004), even children who develop into expert musicians usually have parents who are "not performers themselves" (p. 18). Instead, the most common and impactful music experiences in young children's lives occur when parents simply engage in musical experiences (e.g., singing to, listening to recorded music) with them (Brand, 1986; Custodero, Britto, & Brooks-Gunn, 2003).

Custodero, Britto, and Brooks-Gunn (2003) used data from the Commonwealth Fund Survey (CFS) that was conducted between 1995 and 1996 to examine the frequency of parents' music engagement with their children. They were interested in finding any

associations that may exist between musical engagement and various demographic, socioeconomic, and emotional variables. The CFS researchers gathered data from a national "stratified random-digit-dial sample" (p. 557) of 2,017 parents with children three years of age or younger through in-depth telephone interviews. The CFS was ultimately designed to examine family lifestyles and influences on parenting behaviors within the home, and participants responded verbally to a series of questions with Likert-type scale and multiple-choice responses. Of sampled parents, 60% reported singing to or playing music for their child on a daily basis, and another 32% did so weekly. Daily musical engagement was reported more frequently than reading books (37%), but less frequently than general physical play (83%) and hugging or cuddling (89%). The researchers found that sampled parents sang to or played music for children younger than two years significantly more than older (2-3 years) children. This consistent musical engagement was also significantly more likely to occur with first-born children, and mothers engaged in these musical activities significantly more than fathers. In addition, parents who had pursued post-secondary education were more likely to engage in frequent musical experiences with their children, but there were not significant differences between parents from different racial/ethnic backgrounds or parents in different annual income brackets. What Custodero et al. demonstrated was that most children in the United States, regardless of their family's ethnic orientation or socioeconomic status, have at least one parent who acts as consistent musical model during the first two years of their lives.

Brand (1986) further explained that parents serve as musical models for their children by creating positive musical environments at home. Brand investigated the

relationship between the home musical environments and various musical attributes that 116 second-grade students possessed. The students completed Gordon's Primary Measures of Musical Audiation (PMMA) test to assess their tonal and rhythmic perception, and their music teachers rated students' musical knowledge, performance skills, music literacy, and musical "initiative" (p. 115), a term Brand used to describe student interest and motivation. Students' parents were asked to self-report various aspects of home musical environments on Brand's self-designed questionnaire. Brand found that no significant correlations existed between home musical environments and students' musical aptitude. In addition, musical home environments were not significant predictors of performance on the PMMA test. Brand did, however, find a statistically significant relationship between musical home environments and teachers' assessments of student achievement. Overall parental attitudes toward music and music involvement with their children were found to have the strongest relationship with student musical achievement. Ultimately, Brand described a positive musical home environment as being derived from parents' positive attitudes toward music, and from parents exhibiting such behaviors as "singing to and with the child, providing toys that make sounds/music, providing toy musical instruments, and helping child[ren] learn songs" (p. 118).

In a similar study, Zdzinski (1996) examined the relationships among student-reported parental involvement, music aptitude, grade level, and sex as they related to affective, musical performance, and cognitive musical outcomes of instrumental music students ($N = 406$) representing grades 4-12. All of these variables were assessed using a battery of previously published measurements instruments in addition to Zdzinski's more subjective Performance Rating Scale. Zdzinski also created the Parental Involvement

Measurement Tool to examine the frequency with which parents were engaged in selected parental involvement activities and assess the degree of parental involvement of those engaged in these activities. Students were subsequently categorized into one of two groups (grades 4-8 and grades 9-12). Zdzinski found that various measures of parental involvement were significantly related to students' affective, cognitive, and performance outcomes. Most notably, the group of younger students' performance and cognitive musical outcomes were significantly related to parental involvement, but this relationship lessened as students grew older. Affective outcomes were significantly related to parental involvement only in the group of secondary school students. Zdzinski concluded that parents were their children's first teachers, and in this role, they could provide positive attitudes toward music learning and positively influence music student achievement.

Sloboda and Howe (1991) investigated the various aspects of children's backgrounds that contributed to the success of "promising young musicians" (p. 5). They looked not only at the ways that parents contribute to a child's musical success and development, but also the contribution of music teachers. Sloboda and Howe conducted semi-structured interviews with students ($N = 42$) who attended a specialist music school and their parents ($N = 20$). School staff familiar with students' musical abilities categorized each student in either an exceptional or an average musician. The interviews were designed in a way that would "probe significant aspects of the child's musical life prior to being selected as a pupil of the school" (p. 7). Sloboda and Howe found that 72% of parents were only minimally involved in music making as adults, and there were no significant differences between parents of average and exceptional musicians. In

addition, 67% percent of students had at least one instrument in the house from the time of birth. Unexpectedly, significantly more average musicians reported the presence of instruments in the house at birth than exceptional musicians. Most students began formal music lessons between the ages of four and eight and did so because their parents "believed that music lessons were something which any child should have as a matter of course" (p. 10). Additionally, 50% of parents spoke regularly with their child's music teacher, and several (24%) actually attended and observed their child's music lessons. Once children were at home, the majority of parents (90%) encouraged students to practice, and 33% reported monitoring or supervising children's practice activities. This was partly due to the fact that 53% of the students needed considerable external pressure from their parents to engage in music practice.

In a follow up study with children ($N = 257$) ranging in age from eight to eighteen years, Davidson, Sloboda, and Howe (1995) tried to determine whether or not parental and teacher support were necessary for student musical success. The students were divided into the following five groups: group one included students who attended a specialized music school; group two included students who auditioned at the music school but lacked the musical proficiency to be enrolled; group three included students who inquired about attending the music school, but never formally applied; group four included student musicians from a public school who had never considered auditioning for a specialized music school; group five included students who once studied music, but had since given up music study all-together. All students and at least one of their parents participated in structured interviews focusing on parental involvement in lessons, initiating practice, supervising practice, developing children's musical skills prior to

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school, children's perceptions of musical interest prior to school, and parent's own musical involvement. In addition, participants were asked various questions about music teachers and years of music study within the school.

Davidson et al. (1995) found that children who attended the specialized music school received more parental support than other students because they had access to music lessons, and their parents consistently encouraged them to practice. Additionally, parents of music school students reported singing to their children prior to age three significantly more than other parents. Also, the parents of music school students were significantly more involved in music (even as amateur listeners) than any other group of parents, while parents of music dropouts were the least involved in music. Davidson et al. concluded that persistent music learners, regardless of the school they attended, have different musical relationships with their parents than children who give up music study. At a young age, persistence in music learning was largely derived from extrinsic parental support. It was not necessarily important that parents engaged in high levels of musical activity themselves. Instead, Davidson et al. reaffirmed the importance of parents in assisting and supporting their child's music study.

Finally, it is important to note that under certain circumstances parental music modeling and musical home environments may negatively impact student motivation in music. Davidson and Borthwick (2002) conducted a longitudinal case study with the Brown family over the course of 18 months to observe, engage with, and interview family members and examine "perception[s] of and engagement with music" (p. 127). Within the Brown household, parental support and musical engagement with the two children had a profound impact on their perceptions of musical ability and motivation.

The family mother, Helen, was a gifted pianist who believed her eldest son James had inherited her musical ability. Davidson and Borthwick described this relationship as having a strong sense of shared identity. Helen nurtured and supported James in his piano studies, and as a result, his piano skills flourished. James attributed his success to inheriting "a gene from [his] mother" (p. 127). While this relationship had an apparently positive impact in motivating James, Helen's younger son Daniel perceived lesser musical expectations from his mother. Daniel was "fed up" (p. 127) with hearing that James was the better musician from both of his parents. As a result, Daniel sought artistic expression and recognition elsewhere (visual arts). Near the end of this longitudinal study, James advanced grade levels and moved to a different school. The move resulted in James having less time for music study, and subsequently reduced Daniel's perceptions of a sibling musical competition. Daniel began receiving "his parents' undivided attention…and belief in what he is doing [musically]" (p. 133). As a result, Daniel's musical skills began to blossom and so did his belief in his musical abilities. What Davidson and Borthwick demonstrated was that both James and Daniel lived in a musical environment with an influential musical model. However, they perceived this musical environment differently. It was not until Daniel believed he had his parents' undivided attention and support that he was able to match the musical success of his older brother.

Summary of External Long-term Influences on Motivation

In summary, the long-term influences on children's musical motivation stem largely from their parents' or caregivers' actions. Whether it is intentional or not, the many parents take on the role of musical models by singing to their children, singing with

their children, and helping their children learn songs (Brand, 1986; Custodero et al., 2003; Davidson et al., 1995). In addition, they create musical home environments for their children by playing music, exhibiting positive attitudes towards music, and providing musical toys (Brand, 1986; Zdzinski, 1996). The modeling shifts to more of a support role in maintaining a nurturing musical environment at home, exhibiting positive attitudes towards music learning (Zdzinski, 1996), creating access (e.g., financial support, transportation) to lessons or sequential instruction, and encouraging (sometimes monitoring) student practice (Davidson et al., 1995; Sloboda & Howe, 1991). Parental support is critical in initiating and sustaining children's motivation in music until they reach an age where they are able to "self-regulate their own learning" (McPherson, 2009, p. 103) and musical engagement.

What remains unclear from the related literature is how significant a role the presence of musical models, early musical environments, opportunities to learn music, and access to sequential music instruction play in motivating students to engage in non-traditional or alternative music learning and making experiences. It seems logical that these external, long-term influences would greatly influence students pursuing more conventional, classical music study. Such students often begin learning to perform at a young age when parents play a critical role in establishing a musically supportive home environment and providing access to musical instruction and instruments. However, alternative musicians (e.g., popular musicians) do not often learn music through conventional (e.g., teacher-student model; sequential instruction) methods. This does not necessarily mean that early musical experiences and support were any less present in alternative music students' lives. However, research is still needed to determine whether

and how the external, long-term motivational influences of students pursuing alternative music instruction differ from tradition, large ensemble participants. Doing so is a necessary step in understanding how alternative music courses may attract a different population of music learners.

Intraindividual Long-Term Influences on Motivation: Achievement and Personality

According to Smith (2011), both prior musical achievement and personality are "large-scale foundations upon which later individual differences are supported…[and] should be considered by those interested in fostering musical motivation" (p. 271) in children. At first glance, students' prior musical achievement would seem to encompass a relatively limited amount of experiences and narrow set of skills. Put simply, children have either engaged in musical activities with varying degrees of success or they have not. However, this rather black and white picture does not fully convey all of the experiences and skills that contribute to musical achievement. At a young age, musical development might also include things like the development and refinement of motor skills, cognitive understanding and differentiation of sounds, exposure to and knowledge about particular styles of music, and general musical knowledge (Smith, 2011). For example, children are born with the ability to move. Initially, most movement is limited to involuntary responses to stimuli (Volchegorskaya & Nogina, 2014). However, as children grow older, they gain control over their motor functions and are able to move to the pulse of music and manipulate their vocal pitches. "Further refinement of these skills (viewed as prior achievement) might include the ability to play a musical pattern on a rhythm instrument [or] sing a song with words" (Smith, 2011, p. 272).

As children mature, researchers and music educators have been interested in assessing their aptitude for music. Edwin Gordon developed a series of tests designed to assess children's general aptitude, or "potential for music achievement" (Smith, 2011, p. 272), for success in and comprehension of music. Researchers have utilized this battery of tests widely to construct a baseline assessment of music student ability for further comparison within and between groups of students (e.g., Costa-Giomi, 2004; Williams, 1972). Although determining students' potential for musical achievement can be useful in helping students develop and differentiating instruction, it seems to have little influence over their choice to pursue and continue music learning.

Costa-Giomi (2004) investigated the early predictors that contribute to children quitting piano instruction. She invited fourth grade students ($N = 76$) who had never taken formal music lessons to participate in her "Piano Project" (p. 58). These students received three years of free piano instruction and a free acoustic piano to practice on. Prior to beginning the program, students completed a series of cognitive ability, tonal and rhythmic musical aptitude, fine motor skills, language, mathematics, and self-esteem assessments. On a weekly basis, participating piano instructors created progress reports that included student attendance records, completion of piano homework, and student practice. Teachers also rated children's "piano competency and achievement…and reported the number of meetings they had with the parents of the students" (p. 59). Of the initial participants, 43 completed the full three years of study, 15 studied for one year or less, and 9 stopped instruction between one and two years of study. Costa-Giomi found that the majority of dropouts were boys (63%), and there were no significant differences in family income, parental employment, parental education, or number of

parents living at home between dropouts and students who remained in piano lessons. The only significant difference demographically was that the majority (78%) of students who dropped out of lessons had no siblings, and the majority (85%) of students who completed the full three years of instruction had two or more siblings. In addition, the cognitive abilities, self-esteem, and fine motor skills of students who remained in piano lessons were not significantly different than dropouts.

Costa-Giomi (2004) concluded that children who completed three years of piano instruction were very similar to students who discontinued instruction. There were no statistically significant differences between their cognitive abilities, musical abilities, motor proficiencies, or their self-esteems. The significant differences found were directly related to the piano lessons. Children who dropped out missed more lessons, practiced less, and completed less homework than the children who remained in piano lessons. As a result, the "clearest indications that a student is likely to drop-out of piano lessons are lowered motivation and diminished achievement" (p. 62). In other words, it was not a student's ability or aptitude for musical success that contributed to sustained musical participation and engagement. Instead, sustained involvement in music learning was largely influenced by students' effort and the subsequent musical progress or achievement [or lack there of] that resulted from that work.

According to Smith (2011), a student's prior musical achievement includes exposure to and knowledge about particular styles of music. For example, Gerry, Faux, and Trainor (2010) described the impact of *Kindermusik* classes on the development of infants' "rhythmic enculturation" (p. 547). They compared infants enrolled in Kindermusik classes with infants who had not received any formal training or exposure

to music. Gerry et al. held infant participants and bounced at the knees to an

ambiguous beat through a two-minute beat-training exercise. There were no accents in

the rhythm, but all subjects were randomly assigned to bounce in a way that represented

either a duple or triple meter (every other or every third beat). After the training, infants

were placed on their parent's lap, and subjected to a series of music and visual stimuli

trials. When Gerry et al. compared Kindermusik and non-Kindermusik infants,

Kindermusik infants "found the rhythmic sequences more engaging, presumably as a

result of their musical exposure" (p. 550). In addition, Kindermusik students

demonstrated a larger familiarity preference with duple meter over triple meter during the

second half of the trials. There were no differences in familiarity preferences observed in

infants with no musical training. According to Gerry et al., this lent evidence to claims

that "formal musical training in infancy affects metrical processing" (p. 550). In other

words, the musical exposure in Kindermusik classes impacted students' growth as

musicians.

Hargreaves, Comber, and Colley (1995) investigated the intersection of age,

gender, and prior musical training on musical preference. They administered a music

preference questionnaire to secondary school students ($N = 278$) in the United Kingdom.

The survey asked participants to identify whether they "like, neither like nor dislike, or

dislike" (p. 245) 12 musical styles including: rap, house/acid, reggae, blues, heavy metal,

jazz, classical, country, chart pop, folk, opera, and rock. Participants also rated the extent

of their musical training by identifying how long they took instrumental lessons or sang

in a choir, either in or outside of school. Hargreaves et al. found a significant main effect

of sex on musical training with girls having reported significantly more musical training

than boys. Additionally, there was a direct correlation between increased musical training and preference for more "serious styles" (p. 248) of music such as jazz, classical and opera. Naturally, because girls received more musical training overall, their participation in and preference for "serious music styles" was much greater than male participants. In other words, because girls were exposed to and received more musical training (past musical achievement), their motivation to continue learning and engaging with the music learning opportunities provided in schools was greater than their male peers.

While prior musical achievement can influence children, it is also "important to consider the possibility that relatively enduring personality traits exert an influence on musical motivation" (Smith, 2011, p. 274). Kemp (1981) administered the Sixteen Personality Factor Questionnaire (Cattell, Cattell, & Cattell, 1993) to collegiate music students ($N = 633$). Students were classified as string, woodwind, brass, keyboard, or singing musicians based on their respective principal instruments. For each group, Kemp analyzed their Sixteen Personality Factor Questionnaire (16PFQ) responses and compared their traits (by group) with previously established 16PFQ "British Undergraduate Norms" (p. 36). According to Kemp, the results suggested that instrumentalists are generally more introverted than the normal undergraduate student population. In addition, brass players and singers "deviate significantly from the composite profile" (p. 36) which meant that brass and vocal performance may attract people with extreme personality traits.   Brass players, exhibited lower intellectual capacity than the general student population, and singers were significantly more extroverted than the general population. By demonstrating that different groups of

musicians exhibited group-like personality traits that deviated from the general population, he lent evidence to the idea that personality may influence motivation to engage with different musical activities including music learning.

Cutietta and McAllister (1997) investigated the relationships between personality, instrument choices, and music participation. They asked 668 seventh through twelfth grade band and orchestra students to complete the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) which was designed to measure tough-mindedness, extraversion, emotionality, and lying personality traits in subjects. They tried to determine whether students with certain personality types were more likely to begin instrumental music instruction, whether students with certain personality types were more likely to continue prolonged study, whether there was a "trend toward homogeneity of personality type among students" (p. 285) that continue studying instrumental music across grade levels, and whether any relationships existed between personality types and continuation by musicians playing specific instruments.

Eysenck and Eysenck (1975) published a set of data depicting scores considered to be normal for the population, and Cutietta and McAllister (1997) used these established norms for their statistical comparisons. They found that beginning instrumentalists did not differ in personality from the general population of middle school students, and instrumentalists who continue studying music into high school also had similar personalities to the general high school population. Finally, although woodwind players tended to be predominantly female and percussionists tended to be predominantly male, "the 'type' of student involved in instrumental music does not noticeably change over time" (p. 291). In other words, similar to the findings of Kemp (1981), students

with certain personality traits appeared to be drawn to specific types of instruments, although these traits did not differ from the general student population. Additionally, personality traits had no bearing on whether or not students would likely continue instrumental music study over time. Finally, Cutietta and McAllister (1997) analyzed male and female subjects separately because they were "known to score differently" (p. 285) on the Eysenck Personality Profile Questionnaire. Therefore, researchers should consider investigating how personality differences between males and females impact motivation in music. Unfortunately, the majority of related music research comparing male and female personalities focused on preference for musical styles. Preference to learn and engage with specific music styles and course content would be considered a situational motivational influence.

Summary of Achievement and Personality Influences on Motivation

In summary, children's prior musical achievements and personality act as foundational building blocks of sustained motivation in music activities. Children's aptitudes (potential for success) for music do not necessarily influence their attitudes towards music; nor do they contribute to their sustained musical participation (Costa-Giomi, 2004). Instead, sustained motivation is impacted by exposure to music, access to musical learning opportunities, and success in musical learning activities, regardless of age (Costa-Giomi, 2004; Cutietta & McAllister, 1997; Gerry et al., 2010). Personality is also associated with musical involvement. Different groups of musicians (e.g., vocalists, percussionists, etc.) exhibit group-like personality traits (Kemp, 1981). However, specific personality traits are not necessarily predictors of sustained motivation and musical involvement (Cutietta & McAllister, 1997). Males and females tend to possess

different personality traits and preferences for different musical styles (Cutietta & McAllister, 1997; Hargreaves et al., 1995). This may help explain the apparent relationship between sex and music participation. Finally, there is a direct correlation between increased musical training and preference for the musical styles and genres traditionally taught in schools. Females tend to receive more musical training, and therefore, they tend to participate in school music opportunities more frequently than male students (Hargreaves et al., 1995).

The related literature lends evidence in support of the idea that a diversified music curriculum might attract students with different personality types, musical preferences, and possibly even more male students. It is important to remember that student musicians' personalities do not differ significantly from the general student population. However, students with different personalities, possibly even male and female students, are drawn to specific types of music learning experiences. Unfortunately, the music-learning opportunities offered in schools traditionally encompass a very limited number of musical styles and genres. Those styles and genres are not likely representative of the music they are exposed to regularly throughout childhood. Knowing this, it would be natural to assume that an expansion of music curricula might attract new students with diverse musical interests and personalities to curricular music learning. However, actions cannot be based on assumptions, and research is still needed to explore whether or not alternative music courses are truly attracting new students to the rigorous study of music.

Intraindividual Long-Term Influences on Motivation: Conceptions of Ability, Attributions, and Reinforcement Valence

Conceptions of ability, attributions, and reinforcement valence occupy a broader category of intraindividual motivational constructs that Smith (2011) identified as "beliefs" (p. 276). According to Smith, "prior knowledge and personality can be viewed as precursors to [these] more specific beliefs and responses" (p. 276). While the previously described influences on motivation (e.g., musical models, early musical environment, access to sequential instruction, personality, sex) reflect seemingly fixed aspects of people's lives, beliefs represent the unique cognitive processes that occur in people's minds. Beliefs represent personalized evaluations and perceptions of people's experiences, and researchers have shown that they impact human motivation.

Historically, musical ability was believed to be an extension of genetically predetermined aural abilities or skills. This view of musical ability is likely "to inhibit a student's motivation to participate in music in the first place, to persist in the face of challenges, or to adopt effective learning strategies" (Smith, 2011, p. 277). However, researchers have shown that the ways humans perceive musical ability are actually complex, "social construction[s], acquiring different meanings in different cultures, sub-groups within cultures, and at the individual level" (Hallam & Shaw, 2002, p. 102). In an attempt to establish a range of possible conceptions of musical ability, Hallam and Prince (2003) distributed questionnaires to participants ($N = 415$) asking them to complete the statement "Musical ability is…" (p. 5). The sample included musicians, non-music educators, adults employed in non-education occupations, students involved in extra-curricular music, and students not involved in any type of music instruction. After data

collection, the researchers analyzed all statements "using an iterative process of categorization" (p. 5). In all, six main categories emerged from the responses including aural skills, receptive responses, generative skills, skills integration, personal qualities, and origins of musical ability. Few participants described musical ability as an inherited trait. Participants who were not regularly engaged in music making (e.g., non-music students, adult non-music educators) provided simple descriptions of musical ability. They described the act of music making (e.g., singing or playing an instrument) to be the greatest indicators that people possessed musical ability. Conversely, actively engaged musicians provided complex, multi-faceted responses describing how music ability developed and evolved over time as people learned more about music. Active musicians "gave greater prominence to motivation, personal involvement, learning skills, metacognition, emotional expression, and communication skills" (p. 18). Hallam and Prince demonstrated that the ways people perceive musical ability largely depend on their musical experiences and achievement. Actively engaged and accomplished musicians understand that musical ability develops over time and involves numerous, interwoven attributes and skills.

Hallam and Shaw (2002) asked participants ($N = 490$) to complete a musical ability questionnaire by rating levels of agreement/disagreement with various musical ability statements. They used similar comparison groups to Hallam and Prince (2003) but further classified participants by the amount of musical training they had received. They found that no significant differences existed in ability scores for the following categories: musical ear, rhythmical ability, listening and understanding, responses to music, being able to play an instrument or sing, being able to read music, and metacognition or relating

to the origins of musical ability. However, significant differences between groups were found for appreciation of music, knowledge about music, evaluative activities, generative activities, technical skills, emotional sensitivity, communication and interpretation, performance in a group, compositions and improvisation, organization of sound, creativity, integration of several skills, motivation, and personal expression. Hallam and Shaw (2002) concluded that the extent of previous training and musical activity create differences in the ways people perceive musical ability. In general, musicians who reported prolonged periods of training emphasized aspects of "musical ability which go beyond being able to play or sing" (p. 105) such as communication, ensemble skills, and emotional sensitivity. "Less musical individuals" (p. 107) focused more on the individual and mechanical skills associated with playing an instrument or singing. Unfortunately, despite Hallam and Shaw's between-groups significance testing, it was difficult to identify exactly where ability perception differences existed because they failed to report any post-hoc analyses of the data.

Hallam (2010) surveyed male and female individuals ($N = 660$; ages 14 to 90) including musicians, non-music educators, amateur adult musicians, non-musician adults, children musicians, and children not engaged in music making. Hallam's survey statements were derived from qualitative ability categories generated during a previous study (Hallam & Prince, 2003). Participants rated the extent to which they agreed/disagreed with various musical ability statements. Hallam (2010) conducted a principal components analysis (PCA) to provide a "more coherent account of the nature of conceptions of musical ability" (p. 313). Hallam found that a six-factor solution explained 46.8% of the variance and subsequently labeled these factors: being able to

read music and play an instrument or sing; musical communication; valuing, appreciating and responding to music; composition and improvisation and the skills need to undertake them; commitment, motivation, personal discipline and organization; and rhythmic ability, pitch skills, and understanding. A comparison of factor mean scores revealed statistically significant differences between participants actively engaged in music making and "non-musicians" (p. 323). According to Hallam, active musicians had significantly higher scores in the expressing emotions and thoughts through music, understanding and interpreting music, communicating through music, and group performance factors. Non-musicians provided higher scores for the composing and improvising factor. She also noted that only one factor encompassed the traditional conceptions of ability related to aural skills. The remaining five factors all focused on elements that "contribute towards expert musical behavior in its various forms" (p. 325). Hallam concluded that, the ways in which people perceive musical ability depends largely on their environment and musical experience. These conceptions also often change over time, and that can help explain the differences in the ways musicians and non-musicians perceive musical ability. While aural skills and observable musical outcomes did contribute to the ways that people viewed musical ability, experienced and successful musicians more readily recognized generative human attributes, such as dedication and motivation, that contribute to improved musical ability.

The ways that people perceive or comprehend musical ability directly impact their attributions of musical success and failure. According to Asmus (1986), the majority of reasons that students attribute to musical failure and success can be classified in one of the following categories: ability, task difficulty, luck, and effort. Attributions are

classified as internal or external (locus of control) depending on whether they originate within an individual or from factors external to an individual. Attributions are also classified as stable or unstable depending on whether or not they are presumed to change over time. *Attribution Theory* (Weiner, 1974) proposes that the causes students attribute to success and failure at a task (e.g., music) will impact how they approach the task in the future. Asmus (1986) used Attribution Theory to investigate the reasons students believed some people are successful in music and others are not successful. Asmus distributed an open-ended response questionnaire to students ($N = 589$) enrolled in instrumental, vocal, and general music classes in grades four through twelve. The questionnaire asked participants to state five reasons why some students succeeded in music and five reasons why some students did not succeed. In all, participants provided 5,092 different attributions in their responses. Using a two by two locus of control and stability matrix (Weiner, 1974) to classify cited attributions, Asmus (1986) identified 38.65% of participants' responses as internal-unstable, 42.92% as internal-stable, 9.85% as external-unstable, and 8.59% as external-stable. He found that students typically cited internal- and external-stable attributions when asked why some students succeed in music, and they cited external-unstable attributions when describing why some students do not succeed in music. In addition, females were more likely to cite internal-stable attributions than males. Finally, Asmus found that as students get older, their attributions tend to shift from internal-unstable reasons to internal-stable attributions. In other words, as students matured, they began attributing musical success to effort instead of innate musical ability.

Asmus and Harrison (1990) investigated the musical motivation and musical aptitude of undergraduate non-music majors ($N = 187$) enrolled in a music appreciation course. They administered Shleuter's (1978) CMAP musical aptitude measure to test tonal imagery, rhythm imagery, and musical sensitivity. In addition, they used motivation measures designed by Asmus and based on his early attribution theory research (Asmus, 1986). These measures asked participants to rate the importance of effort, background, classroom environment, musical ability, and affect for music statements in describing causes of success or failure in music. A second measure designed to assess magnitude of motivation asked participants to indicate the extent of agreement or disagreement with various statements describing personal commitment to music, curricular school music, and music compared to other activities.

Asmus and Harrison (1990) found no significant differences when participants' motivations were compared by sex, academic level, or interaction. Additionally, they found no significant relationships between motivation for music and musical aptitude. However, significant relationships did exist between effort, background, classroom environment, and affect for music variables and the personal commitment and the school music magnitude-of-motivation variables. A subsequent PCA revealed that a three-component solution identified as motivating factors, magnitude-of-motivation, and classroom environment explained 81% of the variance in participant's motivation scores. Asmus and Harrison concluded that while high school students tended to attribute effort and ability to successful musical outcomes, collegiate students placed more importance on affect for music. In addition, there was a strong relationship between motivational factors and magnitude-for-motivation. Although these findings reinforced previous

research that demonstrated how attributions of success and failure in music change over time, the comparison of undergraduate non-music majors with high school music students seemed like an odd pairing. This is especially true given that attribution was measured using musical background, effort, and classroom environment questionnaire statements. Non-music students may have few experiences to draw on regarding these variables and would likely produce biased responses.

Austin and Vispoel (1992) specifically investigated the effects of failure attribution feedback and classroom goal structure on elementary and middle school instrumental music students' ($N = 107$) motivational responses and decision-making. Classroom goal structures referred specifically to "the way in which students are evaluated and/or rewarded" (p. 5). They presented students with a fictitious scenario of an instrumental student who experienced performance failure during a music contest. Certain goal structure and outcome attribution variables were altered in different versions of the story, and students were assigned to one of nine treatments (different versions of the story). Participants then responded to a 35-item questionnaire regarding the student's feelings and his future behaviors. Questionnaire items included statements about future performance, future effort, future strategy use, future risk taking, future support, attribution feedback, and goal-failure affect. Austin and Vispoel found that "on average, subjects believed the fictitious band student 'Bill' would perform better, try harder, use more effective strategies, and receive support from the teacher and other students in the future" (p. 13). They also found that both effort and strategy attribution feedback caused participants to have significantly higher expectations for Bill's future performance improvement, effort, and strategy use. They concluded that students who attribute failure

to ability anticipate significantly less improvement in future performances than those who attribute failure to effort or strategies.

Dick (2006) reported similar findings after he examined the relationships between causal attributions and actual music student performance achievement. He distributed a self-designed attribution measurement tool to high school instrumental music students (N = 299) classified by their music teachers as being either in the top 10% or bottom 10% of musical ability within their schools. Subjects were asked to rate how various causal attributions (e.g., ability, talent, luck, perceptions of music difficulty) affected performance levels on musical instruments. Participants also rated their likelihood of continued music participation and their own perceived performance abilities. Dick found that members of both the low and the high achievement groups identified effort, ability, and practice strategies "viable causes of success or failure at music performance" (p. 55). However, significant differences existed between the "degree of influence" (p. 57) low- and high-achievers placed on various causal attributions. High-achievers viewed talent/ability and effort to be greater contributors to musical success and failure. Low-achievers viewed luck/chance and performing easy music to be greater contributors. Dick found no significant relationships between attributions of musical success and students' intentions to continue performing on an instrument. In other words, students' musical abilities did impact their attributions of success and failure, but these attributions had little influence over their decisions to continue or discontinue music performance.

While conceptions of musical ability and attributions of musical success and failure are seemingly interwoven motivational constructs, Smith (2011) classified the unrelated construct of reinforcement valence as the third, long-term influence on

motivation originating from people's beliefs. Musical reinforcement valence

essentially refers to the idea that people's perceived strengths of rewards (or

punishments) for engaging with music can impact their motivation. Essentially, if people

perceive only small rewards (e.g., enjoyment, aesthetic gratification) from engaging with

music in a particular way (e.g., listening, performance), their motivation to engage with

music in that way will also be small. Smith stated that reinforcement valence is a

personal construct, and therefore, explains how one person can receive pleasure or

gratification from producing a musical sound while others do not experience the same

pleasure. According to Salimpoor, Zald, Zatorre, Dagher, and McIntosh (2015),

expectations of musical pleasure occur as "midbrain dopamine neurons signal potential

upcoming rewards, which allows the anticipation of, and motivation to receive, desirable

outcomes" (p. 86). Salimpoor et al. stated that the reason different people appreciate or

receive pleasure from different types of music is because every individual has "his or her

own unique set of musical schematic templates, depending on the musical sounds…he or

she has previously been exposed" (p. 89) to throughout life. People's unique experiences

with and exposure to certain musical styles create these templates that allow listeners to

establish internal rhythmic, melodic, harmonic, and compositional expectations. When

certain music meets or exceeds a person's musical expectations, dopamine is released in

the brain leading to pleasurable responses to the music. Subsequently, people often find

unfamiliar music, such as music from different cultures, not as enjoyable until those

different sounds become part of their internal musical template.

     In an attempt to identify and describe the main components of musical

experiences that generate musical reward experiences in people, Herrero, Pallares, Seva,

Zatorre, and Fornells (2013) created and distributed the 20-item, *Barcelona Music Reward Questionnaire* (BMRQ) to North American, European, and University of Barcelona subjects ($N = 857$) who voluntarily responded to a posted research participant request. Exploratory, confirmatory, and minimum rank factor analyses revealed the presence of five content factors explaining musical reward experiences. Herrero et al. identified these as emotional evocation (e.g., getting chills from a beautiful melody; appreciating music that contains emotion), sensory-motor (e.g., music makes me want to dance; I can't help singing/humming along with songs I know), mood regulation (e.g., music relaxes me; music comforts me), musical seeking (e.g., looking for new music; spending money on music), and social reward (e.g., music makes me bond with other people; when I share music with someone I feel a special connection). Further analyses revealed musical seeking, mood regulation, emotion evocation, and sensory motor rewards were less prominent in older participants suggesting that these musical rewards decline with age. In addition, professional musicians and participants who indicated receiving prior music instruction indicated higher values in emotion evocation and musical seeking factors than other participants. Finally, women "presented higher values than men in all facets except in the Musical Seeking factor" (p. 129).

Summary of Conceptions of Ability, Attributions, and Reinforcement Valence Influences on Motivation

In summary, three intraindividual long-term influences impact people's motivation to engage with music. Although musical ability was once widely thought to be a genetic or inherited trait, researchers have shown that the ways people perceive musical ability today, largely depend on their musical experiences, training, and

achievement. Conceptions of musical ability often change over time (Hallam, 2010).

People with little musical training generally view musical ability as possessing (or not)

the technical or mechanical skills needed to play an instrument or sing (Hallam & Shaw,

2002). As musicians gain experience and skill, they describe musical ability as an

ongoing process of developing technical ability, communication skills, ensemble skills,

and emotional sensitivity working together (Hallam & Prince, 2003; Hallam & Prince,

2002). Therefore, dedication and motivation are essential components of developing

musical ability (Hallam, 2010). The ways people conceive of musical ability have direct

implications on their attributions of musical success and failure. Generally, people

attribute musical success and failure to internal factors (e.g., cognition, dedication,

determination, etc.). However, as many people age, they begin attributing musical

success and failure to effort and affect for music rather than natural musical ability

(Asmus, 1986; Asmus & Harrison, 1990). Those who continue to attribute musical

success and failure to inherent ability anticipate significantly less improvement in future

performances than those who attribute success and failure to effort or improvement

strategies (Austin & Vispoel, 1992).

Musical reinforcement valence can also impact people's motivation (Smith,

2011). In other words, the size of the rewards people perceive from engaging with music

will likely match their motivation to engage with music. Musical rewards can been

drawn from emotional aspects of music, sensory-motor interactions with music, the mood

regulating effects of music, that act of seeking out and discovering new music, and social

interactions that result from musical engagement (Herrero et al., 2013). However,

reinforcement valence is an individualized construct and is dependent largely on prior

exposure to and experiences with music. While most people receive the preceding

musical rewards to some extent, prior music exposure and instruction can lead people to

value the emotional and personal discovery aspects of music. Understanding the

differences in musical reinforcement valence is critical for music educators because not

all of their students will receive similar rewards from music. Although a choral teacher

may receive chills from the Brahms *Requiem*, and a band teacher may reminisce of the

peer bonding during his or her high school marching band trips, all students are

individuals and may not experience the same joy from these experiences.

There is likely to be some overlap in how intraindividual long-term influences

impact the motivation of classically trained and alternative musicians. For example,

regardless of the type of music being studied or performed, successful or accomplished

classical and popular musicians likely attribute their success to the hard-work they have

put in throughout their careers. In addition, many musicians, regardless of the genre of

music they perform, likely receive similar positive reinforcement from engaging with

music (e.g., enjoyment from performing or creating music). However, in high schools,

many students who enroll in alternative music courses are choosing to study music for the

first time since elementary school. Without consistent and structured practice and

refinement of skills, these students may possess different conceptions of what musical

ability is and what attributes to success in music. Research is still needed to identify

whether or not differences truly do exist in the intraindividual long-term influences that

motivate different populations of student musicians, and to explore the nature of any such

differences that are identified.

External Situational Influences on Motivation: Teacher Attributes, Instructional

Methods, Evaluation and Feedback, Task Attributes, and Social Motivation

Long-term influences on motivation can be viewed as a foundation from which

people's "responses to specific situations" (Smith, 2011, p. 278) are derived. Situational

influences on motivation refer to how individuals evaluate and interpret the various

aspects of the environment around them. People are faced with many opportunities to

engage with or participate in music on a consistent basis. Their choices to engage with

music reflect choices guided by motivation. According to Smith (2011), music "learning

opportunities are situated in time and place and can be expected to evoke different

responses from individuals with varying histories, traits, and attributes" (p. 278). In

traditional educational settings, perhaps the most present situational influence impacting

student motivation is the music teacher. Music teachers are as unique as the students in

their classrooms. Some music teachers are vibrant and charismatic, while others are

reserved, calm, and soft-spoken. "Despite such personality and style differences there is

a common thread that characterizes [music] teachers: they fervently believe in the value

of music and music education…[and they] have a special commitment to their students"

(Brand, 1990, p. 23).

Researchers have shown that teacher attributes can impact music students'

choices and motivation. Much of the research examining the influence of music teachers'

attributes on student motivation has focused on private lesson teachers. Especially in

instrumental music, many students begin working with private instructors at a young age,

and these student-teacher interactions have been shown to impact students' musical

development and motivation. For example, Sloboda and Howe (1992) conducted semi-

structured interviews with elementary and secondary school music students ($N = 42$)

attending an auditioned music school in England to better understand how students chose

music teachers and the reasons they often switch instructors over time. Sloboda and

Howe selected roughly an equal number of pianists, violinists, cellists, woodwind

players, and brass players for interviews. Half of the students were considered to be

outstanding "by the high standards of the school; the other half were judged average or

below" (p. 285). Sloboda and Howe found that students' first music teachers were most

often offered or recommended by their school system, or their parents chose someone

recommended by a personal acquaintance. Interestingly, parents rarely sought out

information about teachers' qualifications or personal attributes.

At the time of the study, most students had switched from their initial teacher

because they or their parents were dissatisfied with the lessons, because they or their

teacher moved, or because they transitioned to a different musical instrument. Parents of

average students were the most frequently dissatisfied parents, and they expressed how

an "unsatisfactory first teacher can adversely affect a child's chance of achieving

outstanding levels of performance at a later age" (p. 290). As students transitioned to

new teachers, members of the outstanding group frequently received teachers based on

"reliable expert information about their musical standing" (p. 292). Sloboda and Howe

(1992) concluded that parents should carefully research and select a student's first

instrumental music instructor, because a positive student-teacher relationship from the

onset is a critical prerequisite for students becoming outstanding musicians. Parents

should also exercise care in selecting subsequent music teachers. This is especially vital

"when it becomes apparent that a child is not being challenged or stretched" (p. 293) by

their current teacher. In other words, teacher attributes play a critical role in nurturing students' musical development and sustaining motivation and skill development over time.

Davidson, Moore, Sloboda, and Howe (1998) further examined the relationship between teacher attributes and students' musical development. Davidson et al. conducted structured interviews with children and their parents ($N = 257$). The children (ages 8-18) were sampled from the following five groups: highly successful and serious musicians, competent serious musicians, competent young musicians, amateur young musicians, and young ex-musicians. Questions posed during the interviews centered on musical backgrounds, practice habits, children's perceptions of the role music played in their lives, and the influence music teachers had on their music study. During the interviews, Davidson et al. asked participants to verbally rate various characteristics of their first and last instrumental music teachers. In addition, participants were asked to provide the dates and reasons for changing teachers. Davidson et al. found that participants rated their most recent lesson teachers as being significantly "more friendly, more relaxed, more chatty, more encouraging, and more pushy" (p. 149) than their first lesson teachers. In addition, students rated their most recent lesson teachers as being significantly better teachers and performers. Davidson et al. explained that personal and professional qualities were likely two underlying constructs that "young people might be applying when judging their teachers" (p. 151). They concluded that more competent or accomplished student musicians perceived their music teachers differently than children who gave up music instruction. At the earliest stages of music learning, there is a strong need for teachers to build rapport by creating a relaxed and nurturing environment and

establishing a friendly relationship with students. As students mature, it becomes increasingly important for them to respect their teachers as performing musicians. Once again, researchers suggested that students' music learning needs evolve over time. As this happens, the specific attributes teachers possess become important in helping students grow musically and sustain motivation to continue learning music over time.

Music teacher attributes have also been shown to influence students' motivation in large performing ensembles. Siebenaler (2006) surveyed suburban high school students ($N = 288$) to "identify some of the factors and influences that may predict continued participation in choral music" (p. 1). The sample included students enrolled in choral music programs ($n = 176$) and students who were non-choral participants ($n = 112$). Siebenaler did not specify whether the non-choral participants were enrolled in other music elective courses. He found that in addition to musical home environments, parental support, peer influence, and musical self-concept, a much greater percentage (33.7%) of high school choir participants had middle school music teachers who "inspired" (p. 5) or encouraged them to participate in high school choir than (7.2%) non-choir participants. In other words, large ensemble music teachers with nurturing or caring personalities may influence some students to continue studying music in schools.

Other researchers have concentrated specifically on the influence that instructional methods and teacher feedback have on music student development and motivation. Green and Hale (2011) articulated the importance of teachers creating meaningful music-learning tasks in promoting motivation in music. They stated that in a traditional performance-orientated learning situation, "practicing the same piece of music over and over, trying to perfect it, can kill motivation" (p. 47). However, when teachers

create opportunities for students to explore and deepen their understanding of the music, motivation can flourish. Duke and Madsen (1991) added that music teachers often lack the ability to plan and implement instruction that promotes student success and correct behaviors or responses. Some music teachers engage in the cyclical process of "reacting to students' inappropriate behavior[s]" (p. 1) or performances through disapproval and subsequent suggestions for musical correction. When music teachers only provide instruction to correct inappropriate musical behaviors or performance, students may continue those behaviors and performance practices as a means of obtaining feedback from their teachers.

Yarbrough and Price (1989) investigated the teaching practices of veteran and apprentice instrumental and choral teachers to determine how their teaching aligned with the effective teaching practices of "direct instruction" (p. 179). Direct instruction involves thoughtful sequential instruction beginning with an introduction of the material to be learned, followed by student engagement in the learning or activity, and then "solidified by immediate praise or corrective feedback" (p. 180). Yarbrough and Price video-recorded freshman music education majors teaching a song to preschool students, sophomore music education majors trained in direct instruction rehearsing their peer musicians, and experienced instrumental and choral music teachers in their normal classrooms. They found that, with the exception of the freshman music majors, the majority of music educators utilized teaching strategies inconsistent with the direct instruction model. All groups spent substantial amounts of time on material delivery and student performance, while neglecting reinforcement of student performance. The majority of rehearsals consisted of structured or guided practice (e.g., teacher instructing

on where to start; teacher setting a tempo). When teachers did provide reinforcement, veteran teachers provided "highly disapproving" (p. 183) feedback, and apprentice teachers provided positive or approving reinforcement. All groups of teachers were more specific in their critical or disapproving feedback and more vague in their positive reinforcement. Yarbrough and Price concluded that teacher disapproval was not always effective and could even be counterproductive in increasing student performance and motivation. They recommended using positive feedback augmented by corrective instruction to have the greatest positive impact on student learning.

Costa-Giomi, Flowers, and Sasaki (2005) further examined the impact of instruction and feedback on student motivation. They conducted a three-year longitudinal study with young piano students ($N = 28$). The sample included students who completed three full years of instruction and students who quit piano lessons during their first two years of lessons. Costa-Giomi et al. videotaped 30-minute lessons at benchmark intervals of time and analyzed the videos for frequencies of various student and teacher behaviors. In addition, the researchers evaluated lesson progress by analyzing 10-second intervals of video and rating them as either "no progress or forward progress" (p. 239). Costa-Giomi et al. also analyzed scores from students' year-one piano examinations. Data analysis revealed that dropouts more frequently sought teacher approval, received less approval, and received fewer verbal cues from their teachers. In addition, students who continued for three full years of instruction performed significantly better on their year-one piano examinations. Overall, teachers gave one approval and made one correction per minute during observed lessons. However, students who completed three years of instruction received more approval than

corrections, and the opposite was true of students who dropped out. Costa-Giomi et al. concluded that in the early stages of piano instruction, no student behaviors were significant predictors of continued participation. However, students who dropped out more consistently sought teacher approval and less frequently received it. While correlation cannot be linked to causation, these findings perhaps suggest that the quality of a teacher's feedback may impact a student's motivation to continue engaging in music learning opportunities.

Duke and Henniger (1998) specifically examined how teachers' corrective feedback affected music students' attitudes about music learning and "the time required to learn a target performance task" (p. 486). They randomly assigned undergraduate college students enrolled in a liberal education music course and fifth- and sixth-grade students to one of two experimental groups. Each participant was aurally taught to play a simple accompaniment to the *Sesame Street Theme Song* on a soprano recorder. Participants assigned to the first experimental condition group received specific corrective feedback on how the accompaniment could be improved in a subsequent performance. Participants assigned to the second experimental condition group were given negative feedback. The teacher simply informed participants what they had done wrong in the previous trial and then were asked to play it again. At the conclusion of the lesson, participants completed a short questionnaire asking them to rate on Likert-type scales the extent to which they agreed or disagreed with various statements regarding the lesson (e.g., I enjoyed learning the recorder; The teacher was encouraging and positive; etc.). Interestingly, there were no significant differences in participants' attitudes between the two treatment groups. According to Duke and Henniger, successfully

learning to play the recorder created positive attitudes and feelings of self-efficacy in participants. These positive feelings and beliefs were so strong that participants were unaffected by the different types of verbal feedback. The researchers concluded that "student accomplishment [of musical goals] may outweigh the positive/negative feedback ratio as a determinant of students attitudes and self-perceptions" (p. 492).

The actual musical tasks and content (e.g., musical genres/styles) of music courses have also been shown to act as motivation for students. For example, Renwick and McPherson (2002) conducted a 3-year longitudinal case study with a young clarinetist. Over the course of the study, the young clarinetist regularly video-recorded her practice sessions and participated in interviews with researchers. Interviews revealed that the participant had a preference for learning "easy" (p.177) pieces of music, not because she lacked intrinsic motivation, but because easier, familiar melodies gave her pleasure. This preference evolved over time, and as her skills developed, she began enjoying the challenge of more difficult repertoire. The most engaged practice Renwick and McPherson witnessed came as a result of the participant asking her teacher to notate a specific tune she was interested in learning. When the participant had a voice in the repertoire selection, she engaged in practice for longer periods of time and exhibited effective "cognitive and metacognitive [learning] strategies that typify experts' practice" (p. 185). Renwick and McPherson concluded that the participant's success in music was contingent on her ability to strike a balance between learning pieces she liked and found personally satisfying, and practicing repertoire that their teacher assigned to improve her technical and musical abilities.

Hewitt and Allan (2012) examined the reasons musicians participated in advanced youth music ensembles outside of school. Members of the West of Scotland Schools Symphony Orchestra and West of Scotland Schools Concert Band completed a questionnaire asking them to rate the importance of different variables on their past and future decisions to participate in the ensembles. Participants were also given the opportunity to provide open-ended text comments to explain their responses. In general, students in these ensembles obtained enjoyment from rehearsals and public performances. Hewitt and Allan found that this positively impacted student musicians' moods and self-perceptions. Participants also enjoyed the repertoire performed, felt exhilarated during public performances, and obtained a sense of satisfaction and achievement from performing at a high level. Participants indicated that it was of vital importance that the conductor created an enjoyable, positive, and challenging experience. Hewitt and Allan added that students' choices to sustain participation were largely influenced by the social aspects of rehearsals, ensemble quality, fun and enjoyment, conductor acknowledgement, and quality of the repertoire performed. Participants indicated that they would likely continue performing with the groups unless rehearsals began conflicting with school requirements and obligations, or if they were no longer able to meet the financial demands of the ensemble.

While Hewitt and Allan (2012) highlighted numerous musical benefits contributing to students' motivation to participate in ensembles, they also described motivation stemming from social situations and interactions. According to Smith (2011), as students near or enter adolescence, relationships with peers and establishing a social status (e.g., popularity) become strong motivating forces. Social motivation can

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ultimately help to explain why groups of students tend to like similar musical genres and artists, engage or participate in musical activities together, and ultimately discontinue musical activities together. For example, Tarrant, North, and Hargreaves (2001) found that *Social Identity Theory*, the foundational belief that people associate with a particular group (the in-group) and other people are then placed by default in an opposing group (the out-group), had direct implications on engagement in musical activities. Tarrant et al. asked adolescent males ($N = 97$) to compare peers from their school (in-group) with peers from another school (out-group) using a set of predetermined negative and postive adjectives. Next, participants rated preferences for six styles/genres of music and estimated the preferences for the same six styles/genres among members of the out-group. Tarrant et al. found that although participants believed that the out-group members likely also enjoyed the same styles of music that their in-group did, they also believed that out-group members had a higher level of preference for the music not preferred by the in-group. Tarrant et al. suggested that there are possible strong ties between social groups and musical preferences that may even be found within small groups (e.g., different social groups within the same school). In addition, "social identity theory may predict the behavior of adolescent groups when they make group comparisons along valued dimensions such as music" (p. 576). Although it was not the focus of this study, social identity theory could ultimately help to explain why some groups of students enroll in and quit music courses together.

MacIntyere, Potter, and Burns (2012) used Gardner's (1985) *Socio-educational Model of Motivation* to explore students' motivation to learn instrumental music. The socio-educational model had four major components including social milieu (social

environment), individual differences, acquisition (learning) contexts, and outcomes. MacIntyere et al. (2012) hypothesized that students who received more support from family members, peers, and teachers would exhibit more positive reactions to group interaction and more positive attitudes toward music learning. They administered a questionnaire designed to measure affective reaction within a group setting, attitudes toward learning, motivation, anxiety, pragmatic orientation, parental encouragement, perceived competence, and social support to high school band students ($N = 107$). MacIntyre et al. conducted a path analysis with the data to examine the relationships between variables. They found that positive attitudes toward other musicians, teachers, music courses, and music in general all positively influenced students' motivation to learn an instrument. Once again, these findings demonstrated that the social aspects of large performing ensembles influence and help sustain students' motivation to pursue music instruction.

Summary of Teacher Attributes, Instructional Methods, Evaluation and Feedback, Task Attributes, and Social Motivation Influences on Motivation

Students are faced with many opportunities to engage with, learn, or participate in music. External situational influences on motivation largely impact the choices students make to engage in these opportunities. Once students enter school, music teachers become a constant, musical presence in their lives. Teachers who create positive relationships with young students have been shown to sustain and nurture student interest and participation in music (Siebenaler, 2006; Sloboda & Howe, 1992). However, as students mature and seek more advanced musical training, it becomes increasingly important that they respect their teachers as knowledgeable and highly capable

performers (Davidson et al., 1998). Although researchers have found that positive feedback supplemented with corrective instruction may have the greatest impact on student learning and motivation, music teachers too often provide instruction that is largely logistical. When they do reinforce students' performance, the majority of that reinforcement is negative or disapproving (Yarbrough & Prince, 1989), and may generate student motivation to continue working towards undesirable musical outcomes (Duke & Madsen, 1991). The quality of a teacher's feedback (i.e., positive, negative) seems to have little impact on student motivation when the students feel successful and proud of their musical accomplishments (Duke & Henniger, 1998).

Students may also be motivated by the different musical tasks and content of music courses. Researchers have shown that students who elect performance ensembles typically enjoy performing, being musically challenged by their teachers, being part of high-quality performing groups, and performing high-quality repertoire (Hewitt & Allan, 2012). If students are given a voice in content and repertoire selection, they may invest more in the learning experiences. However, it is critical for teachers to balance student-selected material with supplemental resources or repertoire to ensure students continue to improve technique, musical ability, and musical understanding (Renwick & McPherson, 2012). Finally, people are motivated by the social benefits that engagement with music offers. Social motivation may explain why peers share preferences for musical genres and artists, engage or participate in musical activities together, and ultimately discontinue musical activities together (MacIntyere, et al., 2012; Tarrant et al., 2001). Ultimately, a number of external situational influences impact people's motivation to engage with music, and often several of the influences are working simultaneously.

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The majority of research on external situational influences on student motivation in music occurred in traditional teacher-apprentice style music lessons or in large performance ensemble settings. However, researchers have shown that music learning outside of schools (e.g., popular music learning) does not often result from traditional, formal instruction (Campbell, 1995; Green, 2002). Instead, these musicians tend to learn informally through imitating other musicians and copying recordings. Without years of consistent teacher-student interaction or access to teacher feedback, it is unclear how these influences might impact student musicians enrolled in alternative music courses. It is, however, likely that some students would be drawn to the course content and music learning opportunities provided by alternative music courses assuming these opportunities are representative of the music learning that occurs outside of schools. Interestingly, alternative music courses can vary widely in their design and curricular content. Many of these courses (e.g., class guitar, electronic music composition) may provide few opportunities for students to engage in music socially with their peers. Understanding that alternative music courses may differ from traditional, formal music learning situations, research is needed to explore whether and how teacher attributes, instructional methods, evaluation and feedback, task attributes, and social motivation influence the motivation of students enrolled in these types of classes.

Intraindividual Situational Influences on Motivation: Task Value, Goal Orientation, Self-Efficacy, and Affective State

While numerous external influences impact students' motivation to engage with music, intraindividual situational influences are at work concurrently creating a complex and dynamic interplay between the environment and the mind. Subjective task value is

one of these intraindividual influences, and perhaps best explained "as an individual's answer to the question 'Do I want to do this task and why?' " (Smith, 2011, p. 282). Wigfield and Eccles (2000) explained that task or achievement value is actually comprised of several different components. The first component, attainment value, refers to the importance people place on doing well at any given task. Second, intrinsic value is generated from the enjoyment people receive from tasks. Third, utility value refers to how given tasks fit into peoples' future plans. Finally, "cost refers to how the decision to engage in one activity limits access to other activities, assessments of how much effort will be taken to accomplish the activity, and its emotional cost" (p. 72).

Eccles, Wigfield, Harold, and Blumenfeld (1993) investigated the task values that first, second, and fourth grade elementary school students ($N = 865$) assigned to various academic subjects and activities. Participants responded to questionnaire items "tapping their beliefs about academic subjects, instrumental music, and sports, as well as other constructs" (p. 832). Eccles et al. asked participants to rate how interesting or fun specific activities were, how important being good at the activity was to the child, and how useful the child believed each activity was. They found that as students got older, their competence perceptions decreased significantly for math, reading, and instrumental music. Similarly, the value they placed on reading and music also declined significantly. Interestingly, the value they placed on sports increased significantly. Overall, boys indicated significantly higher perceptions of competence in sports and mathematics. On the other hand, girls' perceptions of competence in instrumental music were significantly higher. Boys valued sports activities significantly more than girls, and girls valued reading and instrumental music significantly more than boys. Eccles et al. noted that

many of the participants were likely too young to have had much formal instrumental music training. Regardless, children had "just as reliable and differentiated self-concepts and task values for this domain as for domains with which they have had considerably more experience" (p. 845). The researchers concluded that perhaps experience was not a necessary component of forming ability self-concepts and certainly not necessary in making decisions about "how valuable and enjoyable a particular activity might be" (p. 845).

Gates (1991) provided a clear description of how task value may affect music engagement and participation. He suggested that people could be divided into three distinct classifications based on their engagement with music. There are people who participate in music, people who engage with music as audience members, and people who choose not to engage in either of these musical activities (although they may listen to music through other forms of media). According to Gates, "the benefits that attract and continue to reinforce the efforts of members of one group are often irrelevant to [the members of] the other" (p. 9). Music participants can be divided further using the following six classifications: professional musicians, apprentice musicians, amateur musicians, hobbyists, recreationists, and dabblers. Professional musicians consider music as their career. Apprentice musicians are in training to possibly be future professional musicians. Amateur musicians perform music regularly, but they do not consider music to be their career or their future career. Hobbyists are serious about developing musical skills and obtaining musical knowledge, but they rarely perform. Recreationists consider music to be a form of self-entertainment. They are not serious about developing skills,

obtaining musical knowledge, or reaching any true level of musical proficiency. Finally, dabblers only learn enough about music to participate for a short period of time.

Gates (1991) stated that a deeper psycho-behavioral complex of sustaining costs over benefits best explains motivation in music. Every human activity (survival, work, play, serious leisure) has some level of cost built in (e.g., time, money). In addition, most activities will have certain benefits such as receiving nourishment, financial rewards, or entertainment. According to Gates, various classes of participants will sustain costs over benefits for different periods of time. Professionals and amateurs will sustain costs over benefits as long as it is economically feasible because they view music as work. Amateurs and hobbyists will sustain costs over benefits over long periods of time because they consider music to be a serious leisure activity. Recreationists and dabblers will sustain costs over benefits as long as music remains entertaining or "provides a source of curiosity" (p. 15). Therefore, it does little good to compare those who sustain musical participation with those who dropout. Dropping out is one outcome of certain participant types such as recreationists and dabblers, and continuing participation is an outcome of other participant types such as hobbyists, amateurs, apprentices, and professionals. Gates suggested that "information about dropouts will not necessarily tell us much about those who are retained simply because these two groups respond differently to the same phenomenon" (p. 16). To ensure continued music participation in schools, Gates recommended diversifying curricular music offerings to appeal to and retain the different classes of music participants. The same types of courses that attract and retain highly skilled musicians such as apprentices are not the same types of courses that appeal to amateurs, hobbyists, and certainly not recreationists or dabblers.

People's goals influence motivation in nearly all aspects of their lives. However, when goal theories are referenced in discussions of student learning, teachers and scholars are typically referring to either mastery or performance goal orientations (Smith, 2011). Mastery goals broadly refer to the goals people set to achieve specific task outcomes (e.g., performing the first movement of a concerto at written tempo) or personal improvement (e.g., reducing articulation errors in a performance). Performance goals are related to people's concerns with social comparisons (e.g., out-performing peers, not being out-performed by peers). Marsh, Craven, Hinkley, and Debus (2003) identified this as the "Big-Two-Factor Theory" (p. 189), and theorized that the various motivational constructs that comprise performance and learning (mastery) overlap substantially enough to be represented as two higher-order factors. Based on the related literature, Marsh et al. created a *School Motivation Questionnaire* (SMQ) representing the following eight motivation orientation constructs: ego, competition, mastery, intrinsic, cooperation, individual, approach success, and avoid failure. They acknowledged that this list of constructs was by no means comprehensive, but it represented the constructs most frequently used when investigating or explaining academic achievement orientation and the Big-Two Factor Theory.

In order to see if the Big-Two-Factor Model could be used as a higher-order representation of these individual constructs, Marsh et al. collected test-retest data from "high achieving" (p. 197) elementary school students ($N = 606$). Confirmatory factor analyses revealed that when the test and retest data were analyzed separately, the relationships of the eight motivation constructs were supported well by the Big-Two-Factor Model. However, when the test and retest data were analyzed together, the Big-

Two-Factor Model was less successful in grouping consistent higher order variables. Marsh et al. concluded that while their "research provided reasonable support for the Big-Two-Factor Theory, [they] still believe that it is useful for researchers to continue to collect different motivation scales – particularly ones that are most relevant to the aims of a particular study" (p. 215).

Schmidt (2005) used the eight Marsh et al. (2003) achievement orientation variables in addition to music self-concept variables (Asmus & Harrison, 1990) to investigate relationships between motivation variables present in instrumental music students. Schmidt (2005) administered his questionnaire to high school band students (*N* = 300). In addition to including items adapted from Marsh et al. (2003) and Asmus and Harrison (1990), Schmidt's (2005) questionnaire gathered information about participants' grade level, instrument, sex, years of band experience, practice time per week, participation in private lessons, all-county band, participation in solo and ensemble festivals, solo difficulty (grade level), and solo contest judge's ratings. Schmidt also asked participants' band teachers to rate their performance achievement and overall effort in instrumental music. Factor analysis revealed that a three-factor solution of the variables would explain 71.83% of the variance in student responses. Schmidt labeled Factor One as *Learning/Task Orientation*, and it contained variables from intrinsic, mastery, and cooperative motivation orientations in addition to commitment to band variables. Schmidt labeled Factor Two as *Performance/Ego Orientation*, and it contained competitive, ego, approach success, and avoid failure variables. Finally, Schmidt labeled Factor Three as *Individual Orientation*, and it was defined by individual orientation and self-concept variables. Of the individual motivation variables, intrinsic orientation, self-

concept, and commitment to band were significantly correlated to teachers' assessments of student performance and effort, practice time, and solo/ensemble participation.

Interestingly, there were no correlations between ego, competition, and avoid failure orientations and teacher ratings of achievement. Schmidt concluded that intrinsic and cooperative orientations likely contribute more to instrumental students' motivation than extrinsic or competitive orientations. In addition, the Factor analysis largely supported Marsh et al.'s (2003) motivation model, but with instrumental students, a third motivational factor defined primarily by individual orientation emerged as relevant. Schmidt (2005) recommended that future research should seek to enhance the generalizability of his findings beyond instrumental (band) students.

It is important to note that goal orientations are directional. In other words, "both mastery and performance goals can be construed in an approach or avoid direction" (Smith, 2011, p. 284). The idea that people's actions can be viewed as trying to reach or avoid certain outcomes (goals) comprises the foundational structure of the closely related *Possible Selves Theory* (Markus & Nurius, 1986). According to Markus and Nurius, people possess multiple possible selves (visions of a future self). Possible selves extend beyond simple "imagined roles or states of being…[because] they represent specific, individually significant hopes, fears, and fantasies" (p. 954). Put simply, Possible Selves Theory suggests that people's thoughts or visions of what they might become, what they hope to become, and what they fear becoming directly influence their motivation to engage in various activities in the present.

According to Campbell (2009) *Music Possible Self Beliefs* explain the "conceptual link between cognition and motivation" (p. 2) in music learning. Campbell

theorized that traditional school music programs may not motivate students to participate because they do not perceive traditional curricular offerings as meeting their "immediate or future [musical] needs" (p. 20). By investigating the relationships between middle school student music participation in different music electives, gender, and their musical possible self beliefs, Campbell hoped to better understand how music students envisioned their musical futures. Campbell created and distributed *Musical Possible Selves* and *Music Participation* questionnaires to eighth grade students ($N =$ 199) representing the entire eighth-grade student body at one school. Statistical analyses revealed significant correlations between students' *now* and *future possible selves* in all musical contexts studied. Within Campbell's sample, more males were involved in instrumental groups than females, and more females were involved in vocal/choral groups than males. However, males who did participate in vocal music were also more likely to participate in other music activities, and the same was true of women in instrumental music. This was significant because, at least to some extent, these students were "doing something different than most of their same-gender peers" (p. 183). Campbell also found strong relationships between music participation and *music possible selves*. As a result, Campbell concluded that if teachers were able to connect school music curricula to the ways in which students engage with music outside of school, and connect the curricula to students' visions of their future musical engagement, adolescents "may begin to see the relevance of music learning to their everyday lives and increase their music participation in the process" (p. 185).

Musical possible selves may also help explain continued or sustained motivation in practicing musicians. In an online community, Schnare, MacIntyre, and Doucette

(2012) surveyed musicians ($N = 204$) representing 25 nationalities and 66 different instruments (including voice) about their *music possible selves*. The survey consisted of three, open-ended prompts asking participants to describe what they hoped for, expected, and feared as musicians over the course of the next year. Schnare et al. found that several themes emerged from the data. Musicians' *hoped-for selves* typically described desires for musical improvement (e.g., creativity, versatility, technical ability, knowledge, and performance), hopes of continuing music education through formal lessons and post-secondary training, making social connections (e.g., forming a band), being successful (e.g., being well-known and respected), and enjoying the musical experiences they were engaged in. Musicians' *expected selves* included nearly identical responses to their *hoped-for selves*. However, nearly 20% of expected selves carried negative connotations such as losing facility due to age, being too busy to practice, and inability to make a living solely as a musician. Musicians' *feared selves* included being considered a poor musician, lacking musical knowledge (e.g., being seen as a fraud or having a serious gap in knowledge or skills), broken connection (e.g., losing one's spot in a band), financial difficulties due to music careers, and injury or illness. Schnare et al. concluded that most musicians' *musical selves* are comprised of "positive hopes counterbalanced by negative fears" (p. 108). In general, expected *musical selves* are more realistic or conservative versions of musicians' *hoped-for selves*. Musicians set goals and construct plans to achieve their *hoped-for selves* while simultaneously working to avoid any obstacles that would result in their *feared selves*.

Task value and goal achievement are intraindividual motivation influences that students use when deciding whether or not they will chose to engage in a musical task.

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Self-efficacy is an equally strong motivational influence that is at work when people

decide whether or not they would be able to succeed at that task (Bandura, 1977; Smith,

2011). In general, "accomplishing a task, observing the completion of a task, verbal

encouragement, or physical signals" (Ritchie & Williamon, 2011, p. 147) all influence a

person's self-efficacy. In addition, beliefs of self-efficacy are situational, but people who

possess generally high self-efficacy are typically more persistent and able to vary

strategies to complete tasks. Given that musicians are often left highly vulnerable to

criticism and perceived failure during performances, the effects of self-efficacy on

motivation has been an area of interest for music researchers. For example, McCormick

and McPherson (2003) administered a self-report questionnaire containing self-regulatory

learning and motivational measures to piano, string, brass, and woodwind

instrumentalists ($N = 332$; ages 9-18 years) who were completing "Trinity College,

London graded, externally assessed performance examinations" (p. 41). McCormick and

McPherson found a strong relationship between self-efficacy and successful musical

performance. In other words, students who self-reported high self-efficacy in music

typically performed better on the graded music examination than peers with low self-

efficacy beliefs.

In opposition to McCormick and McPherson's (2003) findings, Nielsen (2004)

investigated the learning and study strategies of first-year collegiate music students and

did discover a link between self-efficacy and cognitive learning strategies. Nielsen

distributed *The Motivated Strategies for Learning Questionnaire* (MSLQ) to advanced

classical, jazz, and rock musicians ($N = 130$) enrolled in music programs at six

Norwegian universities. The MSLQ contained 50 items designed to measure cognitive

learning strategies (e.g., rehearsal, organization, critical thinking), metacognitive learning strategies (e.g., metacognitive self-regulation), and resource management strategies (e.g., time and study environment, effort regulation, peer learning and help seeking). The MSLQ also contained a separate section designed to measure participants' self-efficacy beliefs. Nielsen found that students employed cognitive and metacognitive learning strategies to a greater extent than resource management strategies in their individual practice. In addition, self-efficacy measures were significantly related to all learning strategies with the exception of effort regulation. In other words, students who believed that through practice they were able to learn and perform musical tasks also indicated using a wider variety of learning strategies. The findings from this study may demonstrate that as musicians mature through adolescence and into young adulthood, continued brain development allows them to utilize various learning strategies to a greater extent. Subsequently, use of multiple learning strategies can increase their musical self-efficacy beliefs.

Ritchie and Williamon (2011) investigated the musical learning self-efficacy of children by administering a demographic questionnaire, *The Short Warwick-Edinburgh Mental Well-Being Scale* (Tennant et al., 2007), the *Strengths and Difficulties Questionnaire* (Goodman, Meltzer, & Bailey, 1998), and *The Self-Efficacy for Musical Learning Questionnaire* (Richie & Williamon, 2010) to students ($N = 404$; ages 7-9 years) from various primary schools in England. Ritchie and Williamon found that girls' musical learning self-efficacy was significantly higher than boys, and children actively involved in musical training (e.g., vocal or instrumental lessons) had significantly higher self-efficacy in music learning than musically inactive students. In addition, significant

relationships existed between high music learning self-efficacy and other activities such as listening to music, participating in individual sports, dancing, doing homework, and reading for pleasure. The strongest predictors of high music-learning self-efficacy scores were taking music lessons, pro-social scores (e.g., benefiting or contributing to others' success), reading for pleasure, and well-being. These predictors were present in both male and female participants, but the order of importance or significance differed by sex. Ritchie and Williamon (2011) concluded that young girls possess higher self-efficacy for music learning than boys, but based on related research, this difference dissipates over time. In addition, experience and access to music instruction (mastery experiences) strongly impact self-efficacy beliefs. They suggested that self-efficacy is task-specific, and individuals with different backgrounds and prior mastery experiences will all exhibit different self-efficacy beliefs when approaching learning tasks.

Sichivista (2007) lent further support to Ritchie and Williamon's (2011) findings after examining the ways parental support of music and students' previous musical experiences influenced students' self-concepts in music. Sichivista (2007) administered the *Choir Participation Survey* (CPS) to collegiate choir members ($N = 154$) to assess the direct and indirect influences of parental musical support and previous musical experience on students' self-concept in music, academic integration social integration, and value of music. Sichivista found that parental support and previous musical experiences were both influential in students' self-concepts in music. This led to better integration in choir classes, higher value placed on musical activities, and more motivation to participate in music in the future. Students who reported more years singing or playing instruments also had higher musical self-efficacy. These students had

greater confidence in their music skills, were generally satisfied with their current

performance capabilities, and also believed that they had the ability to improve their

singing skills.

Finally, it is impossible to overlook the significance of people's overall affective

state when discussing influences on music engagement. A person's affective state is

influenced by positive and negative evaluations of past experiences, emotions, overall

attitude, state of arousal, and impulsion to approach or avoid various stimuli. According

to Smith (2011), "fatigue, arousal, strong emotion, and other influences may be able to

overwhelm other factors and either heighten or diminish overall task pursuit" (p. 286).

The powerful influence of a person's affective state is clearly evident when, despite

intense preparation and training, a young musician becomes frozen with anxiety after

stepping on a stage in front of an audience for the first (or not the first) time.

Perhaps one of the most common and powerful influences on the affective state of

musicians is performance anxiety. Papageorgi, Creech, and Welch (2011) investigated

the perceived performance anxiety experiences in undergraduate musicians and

professional musicians. Papageorgi et al. examined whether musicians' ($N = 244$)

training and genre specialization (e.g., classical, jazz, popular) affected their performance

anxiety by administering a survey designed to measure demographic information,

musical history of musicians, psychological and social issues related to performance,

attitudes towards learning, attitudes towards the "social and environmental contexts for

learning" (p. 22), musical self-efficacy, general self-esteem, general life anxiety, solo

performance anxiety, and group performance anxiety. They found that solo

performances generated significantly higher levels of perceived anxiety than group

performances. In addition, female musicians were significantly more anxious than

male performers in both solo and group performing situations. A variety of personal

factors contributed to musicians' performance anxiety and subsequently impacted the

strategies they used to cope with this anxiety. Western classical musicians, especially

solo performers, reported higher perceived levels of performance anxiety than musicians

specializing in other genres. Papageorgi et al. concluded that an interaction between

musical genre specialization, gender, professional experience, susceptibility to anxiety,

perceptions of how anxiety impacts musical performance, and type of performance (e.g.,

solo, group) best explains levels of performance anxiety in musicians. Knowing that a

person's affective state is a strong influence on motivation and that school music

programs traditionally consist of group and solo classical music performances,

performance anxiety could perhaps be a strong deterrent for some students' sustained

motivation to engage in music.

Performance anxiety can be a powerful affective response prior to and during

musical performances.   Lamont (2012) asked undergraduate and graduate students (N

=35) enrolled in a music psychology course to complete an open-ended questionnaire

describing the "strongest, most intense experience of music" (p. 579) they had personally

ever had. Participants responded to a series of follow-up questions including the location

and time of the experience, if the experience had ever reoccurred, what caused the

experience, and whether or not similar strong musical experiences occurred frequently.

Lamont found that roughly 88% of participants reported some type of positive emotion,

and 63% reported negative emotions. There was a strong overlap in these two categories

because 51% reported a change from negative to positive emotions through musical

experiences, most often related to overcoming performance anxiety. In addition, 54%

described audience responses to their performance, and 34% discussed collaboration and

interaction with other musicians. Also, over half of the participants indicated that their

strongest experiences occurred with classical music. Lamont concluded that performing

music often includes both positive and negative emotions, and due to the challenging

nature of performing and the dedication required in developing musical skills, performing

"provides the potential for confirmation of identity and self-esteem in relation to music"

(p. 587). Almost all participants' experiences included positive emotions or described

pleasure, but often this pleasure came as a result of overcoming negative emotions.

Participants' experiences typically generated strong, positive memories that acted as a

source of sustained motivation in music over time. It should be noted, however, that this

study sampled only musicians who had continued into their young-adult lives. These

participants had successfully overcome negative musical experiences on their paths

towards becoming musicians. It is very likely that similar results would not be found if

the sample included participants who encountered strongly negative musical experiences

and subsequently discontinued music participation.

Summary of Task Value, Goal Orientation, Self-Efficacy, and Affective State

Influences on Motivation

Intraindividual situational influences emanate from inside people and demonstrate

the complex interactions between the mind and environment. Subjective task value

broadly refers to the importance people place on tasks, the enjoyment people receive

from those tasks, how people envision the tasks fitting into future plans, and the costs

people will endure to engage in the tasks (Wigfield & Eccles, 2000). Students who

actively participate in music learning and music making often perceive different rewards and outcomes from musical experiences depending on the role music plays in their lives. Different types of music participants will sustain costs over benefits for different lengths of time, and therefore, no single music course can meet the musical needs of all types of music students (Gates, 1991).

The subjective task value people place on various activities is directly influenced by their goal orientation. Generally speaking, people set mastery (specific task or personal improvement) goals and performance (social comparison) goals to move toward or avoid specific outcomes (Marsh et al., 2003). This is certainly true in the goals musicians set (Schmidt, 2005). Musicians can simultaneously be working to master specific musical challenges, feed their ego, avoid musical failure, and compete against other musicians (and various other mastery and performance goals). Perhaps some of the most influential goals impacting music students' motivations are their musical possible selves, or the hoped for, expected, and feared visions of their future musical engagement (Campbell, 2009; Schnare et al., 2012).

Self-efficacy is an equally powerful motivational force that people use to determine if they might be able to succeed at a task (Bandura, 1977), and people gain self-efficacy beliefs primarily through successfully accomplishing the task previously, observing another successfully complete a task, and receiving verbal encouragement from others (Ritchie & Williamon, 2011). Successful musicians have been shown to possess high self-efficacy beliefs (McCormick and McPherson, 2003), and those beliefs help them utilize various learning strategies to master musical tasks or goals (Nielsen, 2004). Musicians with high self-efficacy beliefs typically had or have access to music

lessons, have [had] parental support, believe they contribute to others' musical success, possess a general sense of wellbeing, and believe they possess the ability to improve musically (Ritchie & Williamon, 2011; Sichivista, 2007).

Finally, a student's overall affective state may be the strongest influence on his or her motivation to engage with music. Evaluations of past experiences, attitude, arousal, and other strong emotions can overwhelm other motivational influences (Smith, 2011). Various stimuli can cause changes in affective state, but depending on the quality or intensity of the stimulus, the effects endure for different lengths of time. Seemingly inconsequential arousals (e.g., excitement from a rock song) impact an affective state for far less time than more impactful experiences (e.g., poorly performing the solo part in a concerto). The act of engaging with music can create both strong positive and negative emotions. However, while many musicians have negative musical experiences, positive performing, collaborating, or listening experiences often have a greater impact on their motivation to continue engaging in music learning and music making experiences (Lamont, 2012).

It seems very likely that students enrolled in alternative music courses would be motivated differently by intraindividual situational influences. Traditional large ensemble courses are often taught as if all students enrolled are apprentice musicians training for careers as future professional musicians. Although the majority of large ensemble students will not go on to careers in music, they value the tasks involved in these courses enough to sustain costs over benefits through multiple years of instruction. Conversely, alternative music courses will often contain students who have not received continuous, formal music instruction past elementary school. While some of these

students may aspire for careers as professional musicians, many will be hobbyists, recreationists, and dabblers with very different goals they hope to accomplish by learning music. Furthermore, because musical self-efficacy beliefs are derived from successful past music experiences, students in alternative music courses who have few past music making experiences to draw will likely be less influenced by self-efficacy beliefs. The same could be said of alternative music course participants' affective responses to music. Many of these students will have not experienced the negative and positive feelings associated with performing music in several years (or ever). Given that these responses can have more significant lasting impacts on motivation than stimulation generated by listening to music, it would seem that affective responses to music could influence alternative music course participants and large ensemble members differently. Although all of these assumptions seem highly likely, research is needed to determine whether and to what extent intraindividual situational influences truly differ between different groups of high school music students.

Chapter Two Summary

The fact that music has endured as a public school curricular subject for nearly 180 years is a testament to the power music has in enriching people's lives. Music education practices seldom change and only do so at times when the musical desires of the public and the prevailing cultural climate promote change. Currently, schools in United States find themselves engrossed by a national education reform movement that seemingly has no end in sight. Despite reductions in music instructional time, music is still taught in over 90% of secondary schools. Typically, students pursuing music instruction in middle schools and high schools have had to choose between traditionally

classical, large performance ensembles such as band, choir, and orchestra. Despite the

narrow range of classical music course offerings, a relatively stable 30% of students

engage in these music-learning experiences. Stable enrollment is a comforting and

reassuring sign to many teachers, and the students who do elect music instruction

typically receive a valuable, high-quality music education. However, music education

leaders have been, and still are, promoting utopian visions of all students in the United

States receiving a music education of substance and depth. If that is the standard to

which music educators are being held accountable, and music education truly is for all

students, then the music education profession has failed and continues to fail.

Recently, some high school music teachers have focused their efforts on

expanding the curriculum to reduce student attrition and draw new students into music

learning experiences. Conversely, many classically trained teachers remain apprehensive

about curricular expansion and fight for the preservation of the traditional, classical

music education practices. The majority of serious curricular reform efforts have

centered on the inclusion of popular music styles and other music offerings thought to be

more culturally relevant or representative of the student body. However, students may

only view music learning in alternative music courses as meaningful if the music is

approached in a manner that is authentic to the music learning that happens and musical

cultures that exist outside of schools. Outside of school contexts, popular musicians

explore musical interests independently, experiment with music making collectively,

make independent and group musical decisions, and learn predominantly through

listening, observing, and imitating. School programs that embrace these values and

permit these types of music learning opportunities have been shown to attract new

students to music courses, create positive and lasting music learning experiences for those students, and promote future student engagement with music. However, much of the research on alternative approaches to music education has consisted of isolated accounts of powerful learning experiences guided by master music teachers. To date, there is no large-scale, empirical evidence to suggest that a dramatic, nation-wide expansion of public school music programs would influence the majority of students to engage in dedicated and rigorous music study. Furthermore, the reasons students choose to enroll in music courses and engage in music-making or music-learning activities cannot be explained simply by the content and design of a music course.

Music participation and non-participation is best explained by motivation. Humans' lives consist of a series of actions all caused or directed by some force or influence. Most often, a complex interaction of multiple influences working simultaneously influences humans' choices. Motivation is at work when secondary school students elect to take music over other arts and non-arts elective courses. In other words, students have to be motivated to choose music courses over other elective course offerings. Motivational influences can be categorized as either long-term (likely generated early in life) or situational (contextual) and as either intraindividual (originated from within) or external (environmental) influences. External, long-term influences include a person's parental musical support, positive musical models, supportive musical home environment, opportunities to learn music, and access to sequential music instruction. Intraindividual, long-term influences include a person's prior musical achievements, individual and group personality traits, conception of musical ability, attributions of musical success and failure, and musical reinforcement valence. External,

situational influences include music teacher attributes, music instruction methods, the attributes of specific musical activities, teacher and peer evaluation and feedback, and social motivation through peer interaction. Finally, intraindividual, situational influences include the task value a person assigns to a musical activity, the various goal orientations at play in decisions, a person's musical self-efficacy beliefs, and perhaps the most powerful influence, a person's affective state and affective responses to music. In the end, all of these influences work cooperatively to influence a person's choice to engage with a musical activity, how intensely a person will engage in that activity, how persistent a person will be in the activity, and the quality of a person's engagement in the activity.

In conclusion, every person is unique and has been influenced differently by the many motivational factors that guide their actions when faced with choices. In an attempt to reach the music education profession's goal of providing a meaningful and quality music education to all students, teachers have been experimenting with expanding the school music curriculum to encourage new enrollment. However, the course content (task attributes) is only one of many influences that will impact a student's choice to enroll. A deeper understanding of all motivational influences and how they impact students with different musical interests will better serve teachers as they continue their mission to reach all students through music education.

CHAPTER THREE: METHOD

The purpose of this chapter is to describe "the basic foundation of the study in terms of design, instrumentation, sampling, data collection, and statistical analysis" (Balian, 1988, p. 285). First, I will briefly review the purpose of this study, the stated research questions, and provide a general overview of and rationale for the study's design. Next, I discuss the steps taken to obtain Institutional Review Board approval for this research. Third, I describe the process I used in designing the data measurement tool utilized in this study. This is followed by a description of the sampling procedure I used and a description of the sample. Fifth, I describe my process for obtaining parental consent and participant assent, followed by a description of the questionnaire pilot testing. I then explain the revisions I made to my questionnaire following the pilot testing, describe the data collection and data analyses procedures, and conclude by listing the limitations of this study.

Design of the Study

The purpose of this study was to determine whether students who elect alternative music classes were influenced by different motivational factors than traditional large ensemble participants, whether influential motivational factors differed by sex, and whether male or female students were more likely to participate in alternative music courses. The following research questions were used in this study:

> **Research Question One:** What motivational factors influence high school students' choices to enroll in and sustain participation in curricular music courses?

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Research Question Two: Do the motivational factors cited by students in alternative music courses differ significantly from students enrolled in traditional large ensemble courses?

Research Question Three: Do the motivational factors cited by students differ significantly by sex?

Research Question Four: Are students' motivations to participate in school music impacted by an interaction between music course enrollment and sex?

Research Question Five: Are male or female students more likely to participate in alternative music classes?

To answer the stated research questions, I collected non-experimental survey data from sampled participants (Tabachnick & Fidell, 2013). In this type of research, the researcher defines the independent variables, but "has no control over the assignment of subjects to levels of it" (p. 2). Non-experimental survey research "provides a quantitative or numerical description of trends, attitudes, or opinions of a population by studying a sample of that population" (Creswell, 2014, p. 13). I determined that administering a quantitative survey was the most appropriate type of data collection procedure to utilize in this study for several reasons. First, surveys provide the researcher with an efficient opportunity to gather a large amount of data in a relatively short period of time. Second, I wanted to include a broad sample of music students representing the diverse cultures, geographic regions, and socio-economic statuses present in Minnesota. Third, carefully designed survey research allows a researcher to use a small sample of participants to make inferences about a larger population. Fourth, I wanted to compare and identify differences in survey responses between multiple groups of participants. Finally, I

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wanted to see if previously established quantitative motivation variables could be collapsed or condensed into larger, underlying motivational influences (Creswell, 2014).

Institutional Review Board Approval

Prior to conducting this study, I applied for approval from the University of Minnesota Institutional Review Board (IRB). The IRB reviews all research projects conducted by University of Minnesota researchers that involve human subjects. IRB review is required to ensure subjects are not placed at undue risk and participate willingly by providing uncoerced, informed consent. I applied for IRB approval on October 20, 2014. After a full IRB review, they asked that I provide a complete list of all participating schools accompanied by district or administrator approval. In addition, the IRB asked that I revise my parental consent letter so that it was written in language that could be understood by someone with an eighth-grade level of reading proficiency. After making the necessary revisions and submitting all required documents, I was granted full IRB approval on December 8, 2014 (see Appendix A). After the study was approved, I was required to submit a change of protocol request, because the list of participating schools had changed. In addition, I was originally approved to survey a sample of 1,500 participants. After initial contact with participating music teachers, I determined that this estimate was low. I also asked for approval of a sample size increase to 2,500 participants. The IRB approved the change of research protocol request on January 12, 2015 (see Appendix B).
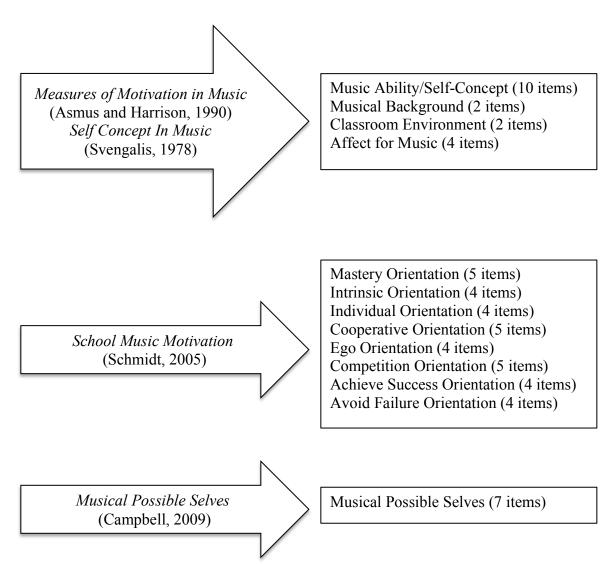
Data Sources

Several measures used in previous music motivation research were examined for possible inclusion in the present study (Asmus & Harrison, 1990; Campbell, 2009; Dick,

2006; Schmidt, 2005; Svengalis, 1978). Alone, each of these prior studies investigated

specific motivational constructs (e.g., attribution theory, musical self-concept, mastery-

goal motivation). However, researchers have shown that numerous factors influence

participation in and engagement with music. To reflect the broad scope of these

influences, I determined that creating a new measurement tool was necessary to best

answer the stated research questions. Quantitative data were collected using a single,

self-designed measurement tool, which I named the Musical Motivation Questionnaire

(MMQ). The MMQ was designed to gather demographic information and to measure the

influence of different motivation variables on participants' choices concerning enrollment

in curricular music courses. In designing the MMQ, I adapted items from the *Measures*

of Motivation in Music: Motivating Factors and Magnitude of Motivation Questionnaire

(Asmus, n.d.; Asmus & Harrison, 1990), *School Music Motivation Questionnaire*

(Schmidt, 2005), *The Musical Possible Selves Questionnaire* (Campbell, 2009), and the

Self-Concept in Music Questionnaire (Svengalis, 1978). It is important to note that

Schmidt's (2005) full questionnaire was not published or readily available, but within his

article, he provided explicit instructions on how he adapted his measurement instrument

from previous research conducted by Marsh, Craven, Hinkley, and Debus (2003). The

Marsh et al. questionnaire was available, and I adapted its items using the procedures

described by Schmidt (2005). I chose these instruments because they were established

and reliable quantitative measures of motivation, and each represented a variety of

motivational influences. I created a composite list of all 189 motivational scale items

from these previous studies and grouped them respectively by their previously

established categories. I wanted to reduce the length of the questionnaire so it could be

successfully completed within a 15-20 minute timeframe. I worried that exceeding this timeframe would increase participant fatigue and increase the number of incomplete questionnaires. Therefore, I reduced the MMQ to 60 total items representing 13 categories of motivation variables. To do this, I first removed all duplicate, or nearly identical, items from the composite list of variables. Then, using Asmus and Harrison (1990) and Schmidt (2005) as models, I systematically removed additional items so that most motivation categories were represented with four or five diverse variables. The *Self-concept/Musical Ability* items were overrepresented on the MMQ because these categories overlapped at times on the original measurement instruments. For example, on the measurement tool created by Asmus (n.d.) and used by Asmus and Harrison (1990), the statement "I am a good musician" was determined to represent both, self-concept and musical ability motivation. Ultimately, it was difficult to definitively establish separate musical self-concept and musical ability categories based on the wording of the original questionnaire items. These 13 MMQ motivation categories, the respective number of items per category, and the original studies from which they were adapted are represented in Figure 3.1.

All MMQ items were measured using a six-point Likert-type scale ranging from *strongly disagree* to *strongly agree* (See Figure 3.2). According to Clason and Dormody (1994), although traditional Likert-type scales contain five possible responses, "some researchers use an even number of categories, deleting the neutral response" (p. 31). I omitted neutral responses (e.g., *neither agree or disagree*) on the MMQ to minimize the social desirability bias that can arise from participants wanting to please the researcher or give what they perceive to be a socially unacceptable response (Garland, 1991).

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Figure 3.1. Initial Musical Motivation Questionnaire Items by Category

Measures of Motivation in Music
(Asmus and Harrison, 1990)
Self Concept In Music
(Svengalis, 1978)

Music Ability/Self-Concept (10 items)
Musical Background (2 items)
Classroom Environment (2 items)
Affect for Music (4 items)

School Music Motivation
(Schmidt, 2005)

Mastery Orientation (5 items)
Intrinsic Orientation (4 items)
Individual Orientation (4 items)
Cooperative Orientation (5 items)
Ego Orientation (4 items)
Competition Orientation (5 items)
Achieve Success Orientation (4 items)
Avoid Failure Orientation (4 items)

Musical Possible Selves
(Campbell, 2009)

Musical Possible Selves (7 items)

I also wanted to eliminate the possibility that participants would provide neutral responses to avoid truthfully answering questionnaire items that may make them feel uneasy (e.g., *I really like my music teacher*). Although omitting descriptive labels between the two anchoring points (strongly disagree, strongly agree) would have made the Likert-type scale data more continuous in design, I chose to label each point on the scale. The participants in the present study represented a wide-range of age-levels, and I

wanted to ensure that all participants interpreted the possible Likert-type scale responses similarly. Because the MMQ items were adapted from previously established measures that provided participants with different instructions and utilized different measurements scales, it was necessary to modify slightly the wording of some MMQ items so they could be answered using the same Likert-type scale. For example, Asmus and Harrison (1990) asked participants to indicate how important they believed each statement was in determining their success and failure in music. Therefore, *"Having musical parents"* was changed to *"My parents are very musical"* on the MMQ. Once the questionnaire items were finalized, I reversed the wording of seven additional items to negative statements in an attempt to reduce response bias (Pallant, 2010). Next, I randomly ordered all statements through the use of a random number generator. Finally, I added three items to the beginning of the questionnaire to obtain necessary demographic information (sex, age, and music class enrollment) from participants. As a result, the final MMQ consisted of 63 total items (see Appendix C).

Figure 3.2. Sample MMQ Likert-type Scale

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

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Sampling Procedure

Initially, it was my intent to use a purposive stratified sampling procedure to identify and select study participants. Purposive sampling is a process used by researchers to select a sample that embodies certain desired population characteristics "including participants, treatments, outcomes, and settings" (Martin & Bridgmon, 2012,

p. 56). For this study, I sought to compare the motivational influences of alternative music course students with those of traditional large ensemble members. Therefore, I purposively sampled only from high schools that offered both alternative and traditional large ensemble music courses. I also intended to further stratify the sample by including two urban, two suburban, and two rural schools. "Stratification means that specific characteristics of individuals are represented in the sample, and the sample reflects the true proportion in the population of individuals with certain characteristics" (Creswell, 2014, p. 158). Because many motivational influences stem from parental influences, home environments, and cultural values or ideals, it was important to include participants representative of Minnesota's entire student population.

I began the sampling process by obtaining a list of all high schools in the state of Minnesota found on the Minnesota Department of Education's website (Minnesota Department of Education, 2014). Next, I visited each school's website and searched curriculum guides and course listings to deduce which schools offered both traditional large ensemble courses and alternative music courses. I eliminated schools as possible research locations if they offered no alternative music programs, or if I was unable to ascertain music course offerings from the website. All potential research locations were categorized as city (urban), suburban, or rural using the new urban-centric locale codes created by the National Center for Education Statistics (National Center for Education Statistics, n.d.). The National Center for Education Statistics uses locale codes to describe a school's location based on its proximity to an urbanized area. Viable city school locations were confined to the school districts within the two largest metropolitan cities in Minnesota, Minneapolis and Saint Paul. Potential suburban school sites were

located within Minnesota's major metropolitan area, but were no further than 30 miles from the two principal cities. All potential rural sites were located more than 30 miles from Minnesota's primary urban center. One of the two city school districts did not permit external (non-district employee) Ph.D. research or survey-only research to be conducted within its schools, and therefore, these school locations were removed from the list of potential research sites.

Through the use of a random number generator, I randomly selected six schools (two city, two suburban, two rural) as potential research sites. I sent an email to all music teachers at each location asking if they would be willing to participate in this study and to grant me access to student participants during their normally scheduled music class times (see Appendix D). If teachers agreed to grant me access to their classes, I contacted building administrators requesting permission to conduct research within their schools. For one potential research location, I had to complete an additional research application for review by district administration. If teachers responded by denying me access to their classes, I contacted the next randomly selected school from the respective category. If I received no response from a school location, one follow-up request was sent after one week's time. After another week with no response, non-responsive schools were removed from the list of viable research locations, and another school from its respective urban-centric locale code category was contacted. Four school locations (two suburban, two rural) agreed to participate. Only one city school responded to my request. Unfortunately, the city school district's research application proved too financially costly for me to pursue, and this location was subsequently removed from the list of viable locations. Ultimately, the original stratified sample was abandoned, and the two urban

school locations were replaced with one additional suburban and one additional rural school location.

Description of the Sample

Following the sampling procedure described above, a total of 2,059 high school music students were invited to participate in this study. Each student attended one of the six participating suburban or rural high schools. Using the National Center of Education Statistics locale code classifications (National Center for Education Statistics, n.d.), the first participating high school had an overall enrollment of approximately 500 students (80% free and reduced lunch) and was located in a small suburban area. The second participating high school had an overall enrollment of approximately 1,700 students (38% free and reduced lunch) and was located in a medium-sized suburban area. The third participating high school had an overall enrollment of approximately 3,250 students (15% free and reduced lunch) and was also located in a medium-sized suburban area. The fourth participating high school had an overall enrollment of approximately 500 students (31% free and reduced lunch) and was located in a distant, rural town. The fifth participating high school had an overall enrollment of approximately 700 students (53% free and reduced lunch) and was located in a remote rural area. The final participating high school had an overall enrollment of approximately 375 students (46% free and reduced lunch) and was also located in a remote rural area of Minnesota. School size and location information is summarized in table 3.1.

Table 3.1.

Participating High School Descriptions

	Total School Enrollment	Percentage of Students on Free or Reduced Lunch	NCES Locale Code Classifications*
High School #1	500	80%	Small suburban area
High School #2	1,700	38%	Medium-sized suburban area
High School #3	3,250	15%	Medium-sized suburban area
High School #4	500	31%	Distant rural town
High School #5	700	53%	Remote rural area
High School #6	375	46%	Remote rural area

The entire list of National Center for Education (NCES) locale code classifications can be found on the NCES website: https://nces.ed.gov/ccd/rural_locales.asp

All high school students currently enrolled in music courses were considered potential participants and were invited to participate in the study. However, I intentionally excluded students from this study if they were enrolled solely in music courses that focused on the theoretical, historical, or appreciation of music (e.g., Music Theory, Music History, Music Appreciation, General Music). This exclusion even extended to students enrolled in similarly formatted popular music courses (e.g., History of Rock and Roll). I made this choice for multiple reasons. First, I was most interested in the motivation of students who enrolled in music classes to engage with music through performing, creating, and composing. Second, many of the classical music theory and music history students were likely already surveyed as a member of one of the large performing ensemble or alternative music courses. Finally, I feared that music appreciation, high school general music, and similarly formatted popular music courses

(e.g., History of Rock and Roll) may contain students who were placed in these classes for the sole purpose of fulfilling fine arts graduation requirements. It is possible that such participants would skew the results of this study.

Participant Consent and Assent Procedures

I distributed parental consent forms, either in person or via postal mail, to all participating music teachers. In turn, they distributed the consent forms to all students in their classes at least one week prior to my school research visits. To increase the sample size and reduce sample bias, I utilized passive parental consent procedures. Researchers have suggested that active parental consent yields low response rates and increases the risk of underrepresentation of critical groups within a sample (Ellickson & Hawes-Dawson, 1989). The passive consent forms (see Appendix E) used in this study asked parents to sign and "return a form only if they [did] not want their child to participate" (Ellickson & Hawes-Dawson, 1989, p. 46). All students who returned passive consent forms were excluded from the study. In addition, immediately before distributing the questionnaire, I distributed and read aloud, student assent forms (see Appendix F) to all potential participants. All participants signed and dated assent forms acknowledging their willingness to participate in the study. Only after each subject assented to participation were they given an MMQ to complete.

Pilot Test

Prior to conducting this study, I pilot-tested the MMQ with a *convenience sample* (Utts & Heckard, 2012) of 131 potential participants from a remote, rural high school (National Center for Education Statistics, n.d.) music program. The high school's total enrollment was approximately 550 students (24% free and reduced lunch). This high

school was used solely for pilot testing the MMQ, and none of the participants were included in the main research study. All potential participants underwent the same consent and assent procedures that were utilized in the main study. In total, 113 ($M =$ 15.6 years, $SD = 1.15$) students consented to participate in the study yielding a response rate of 86.25%. The sample included male students ($n = 27$), female students ($n = 83$), and students who did not identify their sex ($n = 2$). Students were enrolled in large instrumental ($n = 24$), large choral ($n = 44$), guitar ($n = 7$), large instrumental and choral ($n = 28$), and alternative and large ensemble ($n = 9$) courses.

Pilot testing is necessary to "establish the content validity of scores on an instrument and to improve questions, format, and scales" (Creswell, 2014, p. 161). This process was also necessary because when a researcher modifies or combines measurement tools such as I did for this study, "the original validity and reliability may not hold for the new instrument" (p. 160). In addition to completing the MMQ, pilot test participants were also asked to circle or identify any questionnaire items that were difficult to understand.

Prior to calculating the Cronbach's alpha coefficient for the MMQ, all responses to negatively worded questionnaire items were "reversed" (Pallant, 2010, p. 97). When viewed as a single, comprehensive measure of musical motivation, the MMQ was determined to have very high internal consistency (Creswell, 2014) with a Cronbach's alpha coefficient of $\alpha = .924$. Although multiple participants identified individual questionnaire items that they believed to be confusing or hard to understand, no questionnaires item was identified more than once. Therefore, I determined that no questionnaire wording changes needed to be made prior to the primary study. The

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majority of additional comments made on pilot tests referred to the similarity of items. While this was intentional, one participant helped reveal that one questionnaire item appeared word-for-word on the MMQ twice. Pilot testing also revealed the MMQ could be easily completed within the estimated 15-20 minute timeframe that I had estimated.

Finally, a preliminary principal components analysis (PCA) revealed the presence of 13 components with eigenvalues exceeding 1, explaining 73.8% of the variance. Results of a parallel analysis showed that only 6 components had eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size. This six-component solution explained a total of 58.5% of the variance. To aid in the interpretation of these six components, the use of oblimin rotation revealed the presence of a simple structure, with all six components showing a number of strong loadings and all but one variable loading substantially in one component. The PCA results gave me confidence that use of the MMQ in the primary research study would be capable of identifying the larger underlying motivational factors the influence students' participation in music courses.
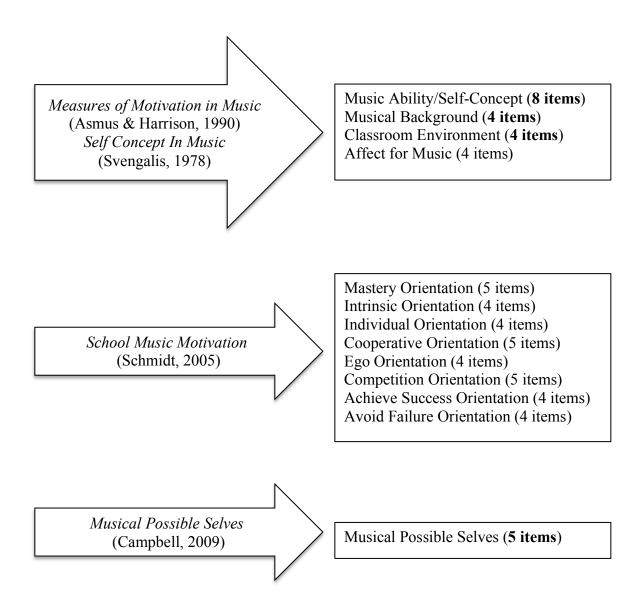
Due to the small size of the pilot test sample, no further statistical analyses were conducted. Also, knowing that the results would likely change with a larger sample size, I made no effort to further investigate the factors that resulted from the pilot PCA. Prior to making revisions to the MMQ, I had an independent music education expert review the questionnaire to further strengthen the content validity of the measurement instrument. She recommended alphabetizing the course offerings on the MMQ to reduce any researcher bias the participants may perceive. In addition, the reviewer suggested altering the MMQ so there was a more uniform representation of variables from each of

the previously established motivation categories. Ultimately, all student and reviewer suggestions were considered, and I proceeded with revising the MMQ.

Revised MMQ

After pilot testing and external expert review of the MMQ, I made several slight modifications. First, I alphabetized the list of possible music courses that participants could select from to reduce any perceptions of researcher bias for certain music courses. Second, I removed the duplicate questionnaire item and one other item that pilot test participants identified as having the same or a similar meaning to another questionnaire item. Both of these items were from the previously established *Musical Self-Concept/Musical Ability* category of questionnaire items. Third, I removed two questionnaire items from the *Musical Possible Selves* category so that this category would no longer be over-represented on the questionnaire. Finally, I added four new items from the related research so that the *Musical Background* and *Musical Environment* categories were represented on the MMQ with four items each. The final MMQ (see Appendix G) included the same 13 motivation categories as the original MMQ, but now each category included either four or five statements. The *Musical Self-Concept/Musical Ability* category served as the exception to variable representation with eight statements included on the MMQ. If viewed separately, *Musical Self-Concept* and *Musical Ability* would be represented each with four items on the MMQ. However, due to the difficulty of distinguishing between *Musical Self-Concept* and *Musical Ability* (Asmus and Harrison, 1990), eight items were included on the MMQ to ensure both were adequately represented. Changes to the final MMQ are represented in bold within Figure 3.3.

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Figure 3.3. Revised Musical Motivation Questionnaire Items by Category

Measures of Motivation in Music
(Asmus & Harrison, 1990)
Self Concept In Music
(Svengalis, 1978)

→

Music Ability/Self-Concept (**8 items**)
Musical Background (**4 items**)
Classroom Environment (**4 items**)
Affect for Music (4 items)

School Music Motivation
(Schmidt, 2005)

→

Mastery Orientation (5 items)
Intrinsic Orientation (4 items)
Individual Orientation (4 items)
Cooperative Orientation (5 items)
Ego Orientation (4 items)
Competition Orientation (5 items)
Achieve Success Orientation (4 items)
Avoid Failure Orientation (4 items)

Musical Possible Selves
(Campbell, 2009)

→

Musical Possible Selves (**5 items**)

Data Collection

During January and February 2015, I traveled to each participating school location. Although data collection occurred over a two-month period, each location was only visited once. However, two visits extended for two days due to the schools' alternating (every other day) block schedule. For the purposes of this study, data collection would be classified as cross-sectional, because it was all collected during one

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visit to each music class (Creswell, 2014). In other words, no longitudinal data were collected from participants over the duration of the study.

Once I arrived at each research location, I visited each music class throughout the day and distributed paper copies of the MMQ to all consenting participants. Participants completed the group administered (Creswell, 2014) questionnaire by hand with either a pen or pencil. Although the MMQ took most participants 10-15 minutes to complete, they were given as much time as they needed to fully complete the task. After all participants had completed the MMQ, I personally collected all questionnaires.

I chose in-person, group administration of the MMQ for several reasons. First, knowing that traditional large performing ensembles can include a large number of students, I worried that schools would not have computer laboratories large enough to accommodate group administered online or electronic questionnaires. Second, I wanted to minimize disruptions to classroom instruction. By traveling to the research sites with hard copies of the questionnaire, I was able to reduce class disruptions to a maximum of 20 minutes. Third, I felt that approaching the MMQ completion as a group activity dramatically improved my overall response rate. Finally, this process eliminated the possibility of the many electronic or technological problems that could occur when using an online survey.

Unfortunately, this data collection method also had several drawbacks. First, the process proved to be financially costly as printing, mailing, gasoline, and hotel room expenses mounted. Second, working as a solo investigator, this method of data collection required coordinating and scheduling visits with six separate school music programs. This greatly lengthened the data collection process. Finally, the fact that the MMQ was

completed by hand meant that data entry also had to be done by hand. This proved to

be a very time-consuming process considering the need for double-checking data entry

for human errors.

Data Entry and Statistical Procedures

Once questionnaires had been collected, I entered all the data into *IBM SPSS*

Statistics Version 22 for analysis. I personally entered all data by hand and double-

checked the data entry for accuracy. Prior to data analysis, I converted all Likert-type

scale responses to numerical values ranging from one to six (strongly disagree = 1;

strongly agree = 6). In addition, I reverse scored all negatively worded items. To answer

the stated research questions, the 60 Likert-type scale items on the MMQ were subjected

to principal components analysis (PCA). PCA is a statistical procedure used to

"summarize patterns of correlations among observed variables [and] to reduce a large

number of observed variables to a smaller number of factors" (Tabachnick & Fidell,

2013, p. 612). A subsequent scree test (Catell, 1966) and parallel analysis (Horn, 1965)

of the factor loadings were used to determine the appropriate number of principal

components or factors to incorporate in the final solution. To help determine the

appropriate placement of variables in specific factors, oblimin rotation was used to reveal

the presence of a simple structure (Pallant, 2010). PCA is sensitive to missing data.

Tabachnick and Fidell (2013) stated that researchers could either estimate missing values

or delete entire cases with missing values present. However, estimations may "overfit the

data and cause correlations to be too high. These procedures may 'create' factors" (p.

618). To avoid creating false or non-present factors, I eliminated all participant

questionnaires with missing Likert-type scale data from the analysis prior to the running the PCA.

I then generated composite factor scores for each factor. To generate these scores, I grouped the variables (MMQ items) by factor and summed each participant's scores for all variables loaded on each factor. According to Tabachnick and Fidell (2013), "for many research purposes, this 'quick and dirty' estimate of factor scores is entirely adequate" (p. 655). Then using student course enrollment and sex as independent variables and summed factor scores as dependent variables, I conducted a factorial multivariate analysis of variance (MANOVA) to determine whether significant differences existed between the motivational influences of students enrolled in the different music course classifications (e.g., large instrumental ensemble, alternative music course, etc.) and students of opposite sex (e.g., male or female). I also used the factorial MANOVA to determine if a significant interaction existed between music course enrollment and sex. Then, using either course enrollment or sex as an independent variable and summed factor scores as dependent variables, I conducted a separate one-way between-groups analysis of variance (ANOVA) for each factor that was determined to contain significant differences. I further examined these differences through the use of Tukey's honestly significant difference (HSD) post-hoc analyses.

Finally, I separated the sample into the following four groups: large ensemble males, large ensemble females, alternative males, and alternative females. Prior to statistical analysis, I eliminated all cases from the data set in which participants failed to identify their sex. I then used the chi-square test for independence to explore the relationship between the two categorical variables (sex, course enrollment). This

procedure compared the observed frequencies of cases that occurred in each category with "the values that would be expected if there was no association between the two variables being measured" (Pallant, 2010, p. 217). In other words, chi-square was used to determine whether male enrollment in alternative music classes was significantly different from female enrollment.

Limitations of the Study

According to Price & Murnan (2004), "Research studies provide new information and serve as a forum for education neophyte [and experienced] researchers. Thus, researchers need to acknowledge the limitations of their study design and instrument" (p. 67). A limitation is a "systematic bias that the researcher did not or could not control" (p. 66) and that might have affected the results of the study. The first limitation of this study was that I had to deviate from my intended sampling procedure. According to Utts and Heckard (2012), "the real world rarely cooperates with well-designed plans, and it can be difficult to collect a proper sample" (p. 162). Initially, I intended to use purposive stratified sampling to most accurately represent the musical motivation of a larger population of high school music students. However, my inability to secure research locations within Minnesota's major urban centers limited my ability to make inferences about the high school music student population at large based on my sample. However, it is important to note that my sample was both large and diverse in several ways. Not only did the sample include over 2,000 participants, but participating schools were culturally, socioeconomically, and geographically diverse. The sample even included multiple distant rural sites, which are often overlooked by researchers due to travel and data collection difficulties.

Price and Murnan (2004) defined delimitation as a "systematic bias intentionally introduced into the study…by the researcher" (p. 66). The first delimitation of this study was also related to my sampling procedures. I intentionally excluded students from this study if they were enrolled solely in music courses focused on the theoretical, historical, or appreciation of music (e.g., Music Theory, Music History, Music Appreciation, General Music). I worried that such participants would skew the results, and I was most interested in the motivation of students who enrolled in, or chose to take, music classes to engage with music through performing, creating, and composing. Despite my rationale, the exclusion of these potential participants further limited my ability to make inferences about the high school music student population at large based on my sample.

Another limitation of this study was that numerous participants turned in questionnaires containing missing data. While omission of sex information potentially impacted the findings from research questions focused on sex motivation and course enrollment comparisons, incomplete Likert-type scale items were of greater concern. This study sought to identify larger, underlying motivation variables through the use of PCA. However, PCA can only be done with complete cases in the data set (Tabachnick & Fidell, 2013). Therefore, 145 participant questionnaires were removed from the study prior to data analyses due to incomplete questionnaire items. Although the sample size was sufficiently large to minimize the impact of these missing data, it is uncertain how the factors generated from the PCA were impacted.

Finally, the statistical analyses utilized in this study have long been at the center of a debate among researchers and statisticians. The statistical procedures typically used

in educational research (e.g., ANOVA) require dependent variables to follow a normal distribution. However, certain dependent variables (e.g., motivation measures) cannot be measured using equal-interval scales. The need to measure such constructs with ranked-order or ordinal scales means that the data generated "will not satisfy the assumption of normality needed in many statistical procedures and may produce biased statistical results that threaten the validity of inferences" (Harwell & Gatti, 2001, p. 105). This is problematic given the fact that the MMQ was comprised primarily of Likert-type scale (ordinal) items with rectangular (one frequency per number) distributions (Tabachnick & Fidell, 2013). In other words, ordinal data do not "pile up in the middle of the distribution" (p. 7) or form a traditional bell-shaped, normal distribution curve.

However, Gaito (1980) stated that regardless of the type of scale used, the numbers used in statistical analyses "do not know where they came from" (p. 566). In other words, the true distances between Likert-type scale items are "irrelevant to the analysis because the computer has no way of affirming or denying it…all the computer can do is draw conclusions about the numbers themselves" (Norman, 2010, p. 629). As a result, if the data are reasonably close to a normal distribution, a researcher "can make inferences about their means, differences or whatever" (p. 629). Furthermore, researchers often treat ordinal variables as continuous variables "when the underlying scale is thought to be continuous" (Tabachnick & Fidell, 2013, p. 7). In the present study, there was no definitive way of proving that the Likert-type scale items on the MMQ were equally distant or continuous. However, given the fact that music researchers (Asmus & Harrison, 1990; Austin & Vispoel, 1992; Campbell, 2009; Davidson et al., 1998; Gumm, 2004; Hallam, 2010, Schmidt, 2005) have treated ordinal

scales as continuous data extensively to further our understanding of motivation in music, I determined that similar treatment of Likert-type scale variables would best answer my stated research questions. Despite this well-established statistical precedent in music motivation research, readers should interpret the results of this study with caution.

Chapter Three Summary

This chapter provided a description of the processes involved in designing and conducting this study on alternative music courses and student motivation. Throughout the chapter, I provided a general overview of the study, discussed the IRB approval process, and described how a created the MMQ from the related research on motivation in music. I then described my sampling procedure and sample characteristics, consent and assent procedures, and MMQ pilot testing and subsequent revisions. I concluded by explaining the data collection process, describing the data analyses procedures, and listing the limitations of this study. The detailed results of the data analysis will be presented in Chapter Four.

CHAPTER FOUR: ANALYSES AND RESULTS

High school students enrolled in elective music courses at six high schools provided the data for this study through their responses to quantitative motivation items on the MMQ. Within this chapter, I present the statistical analyses and results from the data collected. The precedures and results for each research question will be described individually followed by a brief summary of the findings at the end of the chapter. A more in-depth discussion of the findings will be provided in the following chapter.

Participants

A total of 2,059 potential subjects were invited to participate in this research study. Of the potential participants, 1,859 provided consent and completed the MMQ. This resulted in an initial response rate of 90.28%. The statistical procedures employed to analyze the data required, at the very least, MMQs with completed Likert-type scale items. A preliminary analysis of the data revealed that 145 MMQs contained missing Likert-type scale items. These were subsequently removed from the data set prior to data analysis. A total of 1,714 participants' MMQ responses were included in the data analysis resulting in a modified response rate of 83.24%.

The sample included 687 (40.1%) male participants, 1,000 (58.3%) female participants, and 27 (1.6%) participants who chose not to identify their sex. Participants ranged in age from 13 to 19 years old. The sample's *mean* age was 15.9 years old (*SD* = 1.22). The sample included 916 (53.4%) participants enrolled in a large instrumental performance ensemble course, 448 (26.1%) participants enrolled in a large vocal performance ensemble course, 150 (8.8%) participants enrolled in large instrumental and vocal performance ensembles concurrently, 116 (6.8%) participants enrolled in an

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alternative music course, and 84 (4.9%) participants enrolled in both a large

performance ensemble (either instrumental or vocal) and an alternative music course.

The large instrumental performance ensembles represented in this sample included

concert bands, string orchestras, and a pep band for which participants received academic

credit. Many instrumentalists indicated participating in a jazz ensemble, but this was not

offered for credit at any of the participating schools. Large vocal ensembles included an

all-male chorus, three all-female choruses, and multiple mixed-sex choruses. The

alternative music classes represented in this sample included guitar classes, an electronic

keyboard class, several music technology courses with varying names focused on

sampling and creating electronic music through computer software (e.g., *Garage Band*),

and a vocal music course that focused on developing popular music singing techniques

and that culminated in a public performance of popular music.

Research Question One: What Motivational Factors Contribute to High School Student Participation in Curricular Music Courses?

Prior to conducting the Principal Components Analysis (PCA) used to answer

research question one, it was necessary to assess the suitability of the data set. First, the

accuracy of a PCA depends largely on the reliability of the variable correlations. This

reliability is best established through adequately large sample sizes. Leech, Barrett, and

Morgan (2011) stated that "the larger the sample size, especially in relation to the number

of variables, the more reliable the resulting factors" (p. 65). Pallant (2010) recommended

sampling at least 10 participants for each item included in the PCA. Using this sampling

guideline, my sample of 1,714 participants far exceeded the 600 (60 items x 10

participants per item) participants needed to conduct a valid and reliable principal
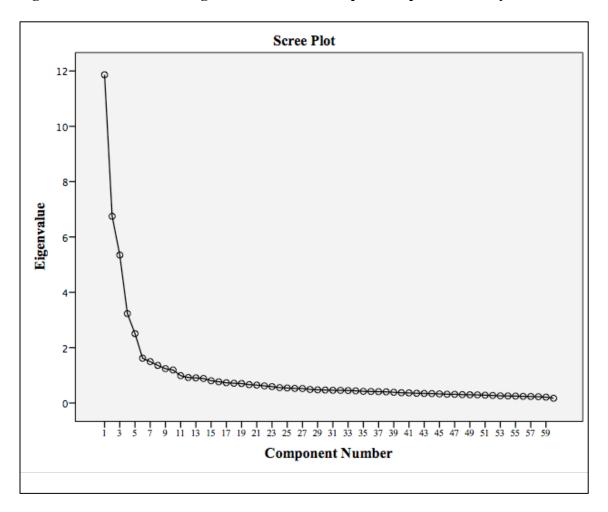
components analysis. In addition, missing data can largely impact correlations. However, prior to conducting the PCA, all cases with missing Likert-type scale data were removed from further analysis. The Cronbach's alpha coefficient of the MMQ was found to be $\alpha = .858$ demonstrating an acceptable internal consistency reliability. According to Pallant (2010), Cronbach's alpha "values above $\alpha = .7$ are considered acceptable" (p. 100). Assumptions of normality are not relevant if PCA is used to descriptively "summarize the relationships in a large set of observed variables" (Tabachnick & Fidell, 2013, p. 618). It is also assumed that the relationships between variables are linear. However, Pallant (2010) suggested that it is "not practical to check scatterplots of all variables with all other variables" (p. 187), and Tabachnick and Fidell (2013), recommended "spot check[ing]" (p. 657) several scatterplots for linearity. Prior to a linearity spot check, I reversed scoring to negatively worded questionnaire items (Q7, Q12, Q25, Q30, Q32, Q35, Q40, Q42, Q55, Q57). A subsequent spot check of several scatterplots provided no evidence of curvilinear relationships, and, therefore, I felt confident that the linearity assumption had been met. Finally, the factorability of the data was assessed using Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. According to Pallant (2010), Bartlett's test should be significant ($p < .05$) for a factor analysis to be considered an appropriate statistical procedure. With the present study's data set, Bartlett's test of sphericity was found to be statistically significant [$X^2 = 55,599.815$; $df = 1770$; $p < .001$]. A minimum KMO value of .6 is also considered necessary for a reliable factor analysis. In the present study, the KMO measure was also determined to be suitable [$KMO = .932$].

Principal Component Extraction

Principal component extraction involves determining the smallest number of factors that can be used to best represent the interrelationships among the set of variables. Kaiser's criterion suggests researchers only keep principal components with an eigenvalue of 1.0 or greater. The initial PCA revealed 10 principal components with eigenvalues of 1.0 or greater. I then plotted the eigenvalues using Catell's (1966) scree test. Catell recommended retaining all factors above the elbow, or break in the plot, as these factors contribute the most to the explanation of the variance in the data set. However, as seen in Figure 4.1, there are two breaks in the Scree plot after five and ten principal components making the principal component solution difficult to interpret.

Therefore, I used Horn's (1965) parallel analysis to compare the size of the eigenvalues with those obtained from a randomly generated data set of the same size. When using a parallel analysis, a researcher only retains principal components with eigenvalues that exceed the corresponding values from the random data set. This approach "has been shown to be the most accurate, with Kaiser's criterion and Catell's scree test tending to overestimate the number of components" (Pallant, 2010, p. 184). A parallel analysis using *Monte Carlo for Parallel Analysis Software* (Watkins, 2000) revealed that nine principal components had higher eigenvalues than the randomly generated eigenvalues from 100 replications of random data sets of equal sizes. These nine principal components (PC) accounted for 19.75% (PC1), 11.25% (PC2), 8.91% (PC3), 5.39% (PC4), 4.18% (PC5), 2.7% (PC6), 2.49% (PC7), 2.26% (PC8), and 2.07% (PC9) of the overall variance respectively. All nine principal components accounted for 59.02% of the total variance. The parallel analysis results are provided in Table 4.1.

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Figure 4.1. Scree Plot of Eigenvalues from Principal Components Analysis

Prior to extracting a final solution from the data set, I conducted a second PCA

with a "fixed number" (Pallant, 2010, p. 194) of nine principal components so all

variables would either be included in the solution or removed from further analysis. I

then used oblimin rotation, a type of oblique rotation, to aid in interpreting the results of

the PCA. Oblique rotation is used when it seems likely that the factors are correlated

(Tabachnick & Fidell, 2013).

Table 4.1

Comparison of PCA Eigenvalues and Randomly Generated Parallel Analysis Eigenvalues

Component Eigenvalues		
Eigenvalue #	Principal Components Analysis Eigenvalues	Parallel Analysis Randomly Generated Eigenvalues
1	11.862	1.380
2	6.747	1.350
3	5.348	1.326
4	3.232	1.306
5	2.506	1.288
6	1.620	1.272
7	1.496	1.256
8	1.359	1.240
9	1.241	1.227
10	1.193	1.213

Given that all variables were adapted from previous measures of motivation in music, it seemed likely that the factors would be correlated. According to Tabachnick and Fidell (2013), when reporting the results from an oblique rotation, it is necessary for researchers to report the elements of the pattern and structure matrices. The *Pattern Matrix* (see Table 4.2) was used in determining the nine principal components solution. The pattern matrix shows a simple structure in which each variable loads strongest on only one principal component (Pallant, 2010). The *Structure Matrix* (see Table 4.3) demonstrates the "correlation between variables and factors" (p. 198).

Table 4.2

Principal Components Analysis Loadings Pattern Matrix

Questionnaire Items	PRINCIPAL COMPONENT LOADINGS PATTERN MATRIX								
	1	2	3	4	5	6	7	8	9
Q8	**.747**								
Q54	**.719**								
Q44	**.705**								

Q48	**.580**							
Q30	**.535**							
Q31	**.482**							
Q52	**.457**				-.394			
Q7	**.439**				-.325			-.316
Q56	**.386**				-.358	-.350		
Q17		**.860**						
Q23		**.822**						
Q10		**.813**						
Q37		**.779**						
Q11		**.763**						
Q9		**.743**						
Q16		**.733**						
Q6		**.641**						
Q46			**.839**					
Q5			**.772**					
Q27			**.750**					
Q20			**.712**					
Q19			**-.634**					.365
Q18			**-.621**		-.319			.352
Q21			**.562**					
Q53			**-.546**					.382
Q3	.335		**-.391**					
Q41				**.727**				
Q25				**.704**				
Q28				**.623**				
Q12				**.605**				
Q45				**.562**				
Q38				**.552**				
Q35				**.500**				
Q42				**.405**				-.353
Q1					**-.779**			
Q15					**-.765**			
Q4					**-.764**			
Q24					**-.759**			
Q29					**-.747**			
Q14					**-.725**			
Q36					**-.696**			
Q49					**-.609**			
Q55					**-.556**			-.475
Q47						**-.716**		
Q50						**-.694**		

Item	1	2	3	4	5	6	7	8	9
Q60						**-.666**			
Q26						**-.638**			
Q34						**-.616**			
Q39						**-.444**			
Q58	.382					**-.425**			
Q13							**-.715**		
Q59							**-.670**		
Q2	.308						**-.523**		
Q33	.373					-.348	**-.428**		
Q43								**.951**	
Q51								**.949**	
Q22								**.449**	
Q57						-.329			**-.485**
Q40									**-.416**
Q32	-	-	-	-	-	-	-	-	-

Simple Structure Presented in Bolded Loadings

Table 4.3

Principal Components Analysis Loadings Structure Matrix

Questionnaire Items	PRINCIPAL COMPONENT LOADINGS STRUCTURE MATRIX								
	1	2	3	4	5	6	7	8	9
Q54	.798			.451				.426	
Q44	.773			.431				.426	
Q8	.748					-.304			
Q48	.669			.443	-.395			.342	
Q52	.650					-.596		.360	
Q30	.609			.414					-.308
Q56	.593					-.580	-.488	.311	
Q7	.587					-.516			-.360
Q31	.533			.408					
Q40	.502			.377		-.468			-.474
Q3	.488		-.423			-.382			
Q17		.845							
Q37		.814			-.355				
Q23		.800							
Q10		.791							
Q16		.770			-.304				
Q9		.768			-.334				
Q11		.755							
Q6		.652							

	1	2	3	4	5	6	7	8	9
Q46			.834						
Q27			.772						
Q5			.769						
Q20			.707						
Q19			-.687						.423
Q18			-.667						.407
Q53			-.617						.425
Q21			.553						
Q41				.741					
Q12	.385			.733				.463	-.321
Q45	.527			.730				.503	
Q28	.385			.722	-.372			.335	
Q25				.698					
Q35	.454			.611				.525	
Q38	.366			.649	-.362			.309	
Q42				.511					-.410
Q24		.366			-.803				
Q15		.372			-.794				
Q29					-.786				
Q14		.318			-.761				
Q4					-.758				
Q1					-.739				
Q36					-.713				
Q49				.342	-.677				
Q55				.301	-.529				-.426
Q47						-.741			
Q60	.312					-.741	-.353		
Q50						-.736			
Q34	.369					-.716	-.387		
Q26						-.677			
Q33	.569					-.585	-.570		
Q58	.553					-.584		.306	
Q39						-.446			
Q13							-.756		
Q59						-.353	-.724		
Q2	.447					-.427	-.618		
Q32							-.345		-.325
Q43								.888	
Q51								.874	
Q22	.336			.325				.550	
Q57									-.531

The final step involved in conducting a PCA is for the researcher to "characterize a [principal component] by assigning it a name or label" (Tabachnick & Fidell, 2013, p. 654). In other words, the researcher must determine how the variables grouped in each principal component "fit together conceptually" (Leech et al., 2011, p. 72). However, before assigning labels to the principal components, I checked the internal consistency of each component by calculating separate Cronbach's alpha coefficients for each factor. The Cronbach's alpha coefficients for principal components one through eight were all greater than $\alpha = .7$ (see table 4.4) demonstrating an acceptable internal consistency reliability (Pallant, 2010). The Cronbach's alpha value for principal component nine was below $\alpha = .7$ and did not demonstrate an acceptable internal consistency reliability. According to Pallant, this is common when scales (principal components) contain very few variables. Therefore, following the statistical analyses (PCA and factorial MANOVA), principal component nine was removed from further analysis and discussion.

I labeled Principal Component One (PC1) "Musical Enjoyment and Future Musical Engagement." PC1 primarily included variables drawn from previous measures of musical affect motivation and musical possible selves motivation (see Figure 4.2). The grouping of these items into a single principal component seems to suggest that the enjoyment students get from making and creating music, however they interpret those actions, directly relates to the visions they have for future engagement with music and music making.

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Table 4.4

Individual Principal Component Internal Consistency Reliability

Principal Component #	Cronbach's alpha value
1	.870
2	.900
3	.857
4	.870
5	.890
6	.822
7	.779
8	.709
9	**.339***

*Cronbach's alpha values a = .7 and greater are considered acceptable

I labeled PC2 "Approach Musical Success and Avoid Musical Failure" because all eight variables grouped into this principal component were drawn from previous measures of approaching success and avoiding failure motivation. High mean scores from PC2 would indicate that a participant actively seeks success in music a course while simultaneously attempting to avoid failure. Although these two types of motivation are different, it is not surprising that these variables grouped together. It seems logical that music students who are trying to be successful would also be trying to avoid failing at musical activities.

Primarily variables from previous measures of cooperation orientation and individual orientation motivations grouped together to form PC3. An examination of the PCA pattern matrix (see Table 4.2) revealed both positive and negative variable loadings. The strongest loadings (the variables that were most representative of the larger latent variable that bound PC3 together) represented the strong influences that peer interaction and cooperation have on music student motivation. As a result, I labeled PC3 "Peer Musical Engagement and Social Interaction." The negative loadings for individual

orientation variables indicated that as participants' scores increased for social motivation variables (stronger agreement), scores for individual orientation variables decreased (less agreement). In other words, participants reporting strong motivational influences caused by wanting to make music and interact with friends also reported weak motivational influences caused by individual music making and activities. The opposite could be said of students reporting strong motivational influences for individual music activities. As a result, it was necessary to reverse score Q19, Q18, Q53, and Q3 prior to conducting the post-hoc MANOVA analysis. Failure to do so would have resulted in ambiguous results. After reverse scoring these items, high group mean scores for PC3 demonstrated that participants within a group were motivated by interacting and creating music with their peers.

I labeled PC4 "Musical Self-Concept" because the eight variables grouped into this principal component were drawn primarily from previous measures of musical self-concept and musical ability motivation. As mentioned previously, researchers have used self-concept and ability interchangeably (Asmus & Harrison, 1990). However, responses to musical ability statements truly measured participants' perceptions, and therefore, self-concept seemed to be a more appropriate, comprehensive label for the principal component. High mean PC4 scores would indicate that a participant possesses a high or positive Musical Self-Concept, and this has been shown to motivate students' participation in music.

PC5 contained variables from previous measures of competition orientation and ego orientation motivations. Therefore, I labeled PC5 "Musical Competition and Ego." This combination of variables seemed to suggest that students motivated by musical

success and perceptions of being the "best" or "better than other student musicians" are also motivated by opportunities to compete with other musicians and feed their egos. In other words, participants who recorded high mean PC5 scores were motivated to participate because proving their musical superiority increased their musical ego.

I labeled PC6 "Musical Mastery and Affect." This interesting group of variables was derived from previous measures of musical mastery orientation and affect for music motivation. While music affect variables focused on the enjoyment generated by creating or making music loaded under PC1, the affect variables that loaded under PC6 described the feelings associated with listening to music. This combination of variables indicated that participants recording high PC6 scores were not only sensitive to affective responses derived from music listening, but were also driven by these responses to master the musical objectives, tasks, and activities. This mastery was not prompted by external teacher approval or academic success like PC2, but instead by an internal desire to be musically successful or proficient.

I labeled PC7 "Music Teacher Relationships and Course Content." The variables grouped within this principal component were drawn from previous measures of intrinsic orientation motivation and classroom environment motivation. However, PC7 did not include either of these previous motivation categories in their entirety. Instead, PC7 only included variables directly related to student and teacher relationships and music course content. Participants who recorded high mean scores for PC7 were motivated by positive relationships with their music teacher[s] and personally enjoyed learning about the content in their music course[s].

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Finally, only three variables loaded under PC8. I labeled this principal

component "Musical Background and Home Environment." The three variables in PC8

were all derived from a previous measure of musical background motivation. These

variables did not necessarily account for prior school music experiences, but instead the

musical background, home environment, and experiences created by parents or

caregivers. Participants with high mean PC8 scores reported having musical parents,

musical families, and access to music instruction at a young age. All MMQ motivation

variables, grouped by principal component loadings, are represented in Figure 4.2.

Figure 4.2. Variables Grouped by Principal Component Loadings

Principal Component 1 – *Music Making Pleasure and Future Musical Engagement*
- (Q8) *When I am an adult, I hope to have a career in music.*
- (Q54) *In the future, I will be a great musician.*
- (Q44) *In the future, people will want to hear me perform music.*
- (Q48) *In the future, I will be a better musician than other people.*
- (Q30) *As an adult, I will not feel comfortable performing music in front of others.**
- (Q31) *I am not afraid to perform music when I think other people can hear me.*
- (Q52) *Making music is enjoyable.*
- (Q7) *Creating music is not fun.**
- (Q56) *I do my assigned work in music because I enjoy figuring things out about music.*

Principal Component 2 – *Approach Musical Success and Avoid Musical Failure*
- (Q17) *I do my work in music class because I do not want my teacher to say bad things about me.*
- (Q23) *I do my work in music class because I do not want to get into trouble with my teacher.*
- (Q10) *I do my work in music class because I do not want my teacher to think that I am unintelligent.*
- (Q37) *I do my work in music class because I want my teacher to think that I am smart.*
- (Q11) *I do my work in music class because I do not want my teacher to give me bad grades.*
- (Q9) *I do my work in music class because I want my teacher to say nice things about me.*
- (Q16) *I do my work in music class because I want my teacher to be pleased with me.*
- (Q6) *I do my work in music class because I want to get good grades from my teacher.*

Principal Component 3 – *Peer Musical Engagement and Social Interaction*
- (Q46) *I do my best work in music when I work with other students.*

- (Q5) *I learn the most in music when I work with other students.*
- (Q27) *I like to work with other students in music.*
- (Q20) *I feel most successful when my friends and I help each other figure musical things out.*
- (Q19) *I work best in music by myself.***
- (Q18) *I do my best work in music when I work on my own.***
- (Q21) *I enjoy being with my friends in music class.*
- (Q53) *I learn the most in music when I work on my own.***
- (Q3) *I like to work on my own in music.***

Principal Component 4 – *Musical Self-Concept*
- (Q41) *My classmates think I do well in music class.*
- (Q25) *I believe my classmates think I am not very good at music.**
- (Q28) *I think I am one of the best musicians in my class.*
- (Q12) *I have never been very good at music.**
- (Q45) *I am a good musician.*
- (Q38) *I think I am just as good or better than most kids in some form of music.*
- (Q35) *I do not have a natural talent for music.**
- (Q42) *I am not very good at writing or reading music.**

Principal Component 5 – *Musical Competition and Ego*
- (Q1) *I feel most successful in music when I do better than other students.*
- (Q15) *I feel most successful in music when I know more than other students.*
- (Q4) *I feel most successful in music when I am the best.*
- (Q24) *I learn the most when I try to do better than other students in music.*
- (Q29) *I like trying to do better than other students in music.*
- (Q14) *I work harder when I try to do better than other students in music.*
- (Q36) *I feel most successful in music when I do something others cannot do.*
- (Q49) *I do well when I try to be the best musician in my class.*
- (Q55) *I work at my own pace and do not try to do better than other students in music.**

Principal Component 6 – *Musical Mastery and Affect*
- (Q47) *I feel most successful in music when I reach my own goals.*
- (Q50) *I feel most successful in music when I really improve.*
- (Q60) *I feel most successful in music when I do something I could not do before.*
- (Q26) *I feel most successful in music when I reach a goal or target.*
- (Q34) *I feel most successful in music when I work to the best of my ability.*
- (Q39) *I love listening to music.*
- (Q58) *I am able to feel the emotion in music.*

Principal Component 7 – *Music Teacher Relationships and Course Content*
- (Q13) *I feel like my music teacher(s) really understands me.*
- (Q59) *I really like my music teacher(s).*
- (Q2) *I do my assigned work in music because the music we learn is really interesting.*
- (Q33) *I do my assigned work in music because I like learning new things about music.*

Principal Component 8 – *Musical Background and Home Environment*
- (Q43) *Musical ability runs in my family.*
- (Q51) *My parents are very musical.*
- (Q22) *I started learning music at a very young age.*

Principal Component 9 (Removed from further discussion due unacceptable internal consistency reliability)
- (Q57) *It is not helpful to put together everyone's ideas when working on a piece of music.**
- (Q40) *I do not like working on or mastering difficult music.**

No Strong Component Loading (Removed from further analysis)
- (Q32) *I do not like the other students in music class.**

*Indicates reverse scoring occurred prior to conducting the PCA
**Indicates reverse scoring occurred prior to post-hoc analysis

Research Question Two: Do the Motivational Factors Cited by Students in Alternative Music Courses Differ Significantly from Students Enrolled in Traditional Large Ensemble Courses?

To answer research question two, I generated composite principal component scores by summing each participant's scores for all variables loaded on each principal component. I then used a factorial multivariate analysis of variance (MANOVA) to compare principal component scores between groups of participants. The null hypothesis for research question two was that no significant differences would exist in the motivational factors that influence students enrolled in alternative music courses and students enrolled in traditional large ensemble courses.

Prior to conducting the MANOVA, I checked to make sure all necessary assumptions were met. According to Pallant (2010), a sample must include at least 20 participants for every dependent variable included in the MANOVA. With eight

dependent variables (principal components), the present study's sample size of 1,714 far exceeds the recommended 160 participants. It was also necessary to check both univariate and multivariate normality. Kolmogorov-Smirnov statistics for each dependent variable were found to be statistically significant ($p < .001$) indicating a violation of univariate normality. Pallant stated that "this is quite common in larger samples" (p. 63), and that a MANOVA is "reasonably robust to modest violations of normality" (p. 285). Again, "a sample size of about 20 in the smallest cell should ensure robustness" (Tabachnick & Fidell, 2013, p. 253). I assessed multivariate normality by creating a Mahalanobis distance value (MDV) for each participant. Each participant's MDV was compared with the corresponding critical value of 26.13 for a MANOVA with eight dependent variables (Pallant, 2010). A total of 23 (1.3% of the sample) participants' MDVs were larger than 26.13, classifying these cases as outliers. They were subsequently removed from further analysis due to a MANOVA's sensitivity to outliers (Tabachnick & Fidell, 2013).

A matrix of scatterplots between variables revealed no obvious evidence on non-linearity, and therefore, the assumption of linearity was satisfied. Pearson's correlation revealed no violations of multicollinearity as no correlation coefficients at or above .8 were found. Box's test of covariance matrices was significant at $p < .001$ violating the assumption of homogeneity of variance-covariance. As a result, I used the more robust Pillai's trace to determine the significance of the MANOVA results. According to Tabachnick and Fidell (2013), "As unequal $n's$ appear and the assumption of homogeneity of variance-covariance matrices is violated...Pillai's criterion is the criterion of choice" (p. 271). Levene's test of equality of error variances revealed that

PC2, PC6, and PC7 violated the assumption of equality of variance. As a result, I

selected a more conservative alpha level $a = .01$ for significance testing.

Results

Results from the factorial MANOVA indicated that significant differences existed

among the motivational factors that influenced student participation in different elective

high school music courses [*Pillai's Trace* = .202, F (32, 6604) = 10.989, $p < .001$, partial

$\eta^2 = .051$]. Therefore, I rejected the null hypothesis. An examination of between-subject

effects revealed that significant differences in the mean scores existed between groups of

participants for each principal component (see Table 4.5).

Table 4.5

Multivariate Course Enrollment Effects

Dependent Variable	*df*	*df error*	M^2	Partial η^2	Sig.
PC1	4	1655	1336.728	.046	**< .001**
PC2	4	1655	249.913	.010	**.002**
PC3	4	1655	1147.811	.055	**< .001**
PC4	4	1655	597.572	.028	**< .001**
PC5	4	1655	248.969	.010	**.002**
PC6	4	1655	226.031	.028	**< .001**
PC7	4	1655	230.523	.041	**< .001**
PC8	4	1655	118.984	.022	**< .001**

*Results significant at $p < .01$

To further explore the nature of the observed statistically significant differences, I

conducted follow-up one-way analysis of variances (ANOVAs) with Tukey honestly

significant difference (HSD) post-hoc tests using a Bonferroni adjusted $a = .006$ to

reduce the likelihood of committing a Type 1 error. I will present the results of these

tests by principal component.

Principal Component 1 – Music Making Pleasure and Future Musical

Engagement

To determine what, if any, significant differences existed in the Music Making

Pleasure and Future Musical Engagement motivation between groups of students enrolled

in various high school music electives, I conducted a one-way between-groups ANOVA.

The null hypothesis was that no significant differences would exist in the Music Making

Pleasure and Future Musical Engagement motivation of participants enrolled in the

different music elective courses. Results from the ANOVA revealed that significant

differences existed in participants' mean Music Making Pleasure and Future Musical

Engagement motivation scores [F (4, 1686) = 21.334, $p < .001$], and, therefore, I rejected

the null hypothesis. The effect size, calculated using *eta* squared [$eta^2 = .05$], was

determined to be small to medium (Pallant, 2010). Tukey HSD post-hoc testing with a

Bonferroni adjusted $a = .006$ revealed that participants enrolled in large instrumental and

large vocal ensembles simultaneously [$M = 38.36$, $SD = 7.72$, $p < .001$] and participants

enrolled in large performance ensembles and alternative music courses simultaneously

[$M = 39.08$, SD 7.67, $p < .001$] were motivated significantly more by Musical Enjoyment

and visions of Future Musical Engagement than participants enrolled solely in a large

instrumental ensemble [$M = 33.18$, $SD = 8.03$] or large vocal ensemble [$M = 34.54$, $SD =$

8.84]. Participants enrolled solely in an alternative music course [$M = 35.78$, $SD = 7.76$]

did not differ significantly from participants in any other group (see Table 4.6).

Table 4.6

Tukey HSD Post-hoc Testing of Principal Component 1 ANOVA

Independent Variable	Comparison	*Mean Difference*	99.5% Confidence Interval Lower Bound – Upper Bound	
Large Instrumental	Large Vocal	- 1.359	- 3.006	.286
	Alternative	- 2.603	- 5.431	.225
	Large Inst/Voc	**- 5.180***	- 7.694	- 2.666
	Large Ens/Alt	**- 5.898***	- 9.132	- 2.665
Large Vocal	Alternative	- 1.243	- 4.232	1.745
	Large Inst/Voc	**- 3.820***	- 6.513	- 1.127
	Large Ens/Alt	**- 4.539***	- 7.914	- 1.163
Alternative	Large Inst/Voc	- 2.577	- 6.119	.964
	Large Ens/Alt	- 3.295	- 9.132	.788
Large Inst and Voc	Large Ens/Alt	- .718	- 4.591	3.154

*Results Significant at p < .006

Principal Component 2 – Approach Musical Success and Avoid Musical Failure

To further explore what, if any, significant differences existed in the Approaching Musical Success and Avoiding Musical Failure motivation between groups of students enrolled in various high school music electives, I conducted a one-way between-groups ANOVA. The null hypothesis was that no significant differences would exist in the Approaching Musical Success and Avoiding Musical Failure motivation of participants enrolled in the different music elective courses. Results from the ANOVA revealed significant differences existed in participants' mean Approach Musical Success and Avoid Musical Failure motivation scores [$F (4, 1686) = 7.98, p < .001$]. Therefore, I rejected the null hypothesis. The effect size, calculated using eta squared [$eta^2 = .02$], was determined to be small (Pallant, 2010). Tukey HSD post-hoc testing with a Bonferroni adjusted $a = .006$ revealed that participants enrolled solely in alternative

music courses [$M = 29.64$, SD 9.02, $p < .001$] were motivated significantly less by Approaching Musical Success and Avoiding Musical Failure than participants enrolled in large instrumental ensembles [$M = 33.37$, $SD = 7.25$], large vocal ensembles [$M = 33.63$, $SD = 7.59$], and large instrumental and vocal ensembles simultaneously [$M = 34.45$, $SD = 8.35$]. Participants enrolled in a large ensemble course and alternative music course concurrently [$M = 31.98$, $SD = 8.35$] did not differ significantly from any of the other groups of participants (see Table 4.7).

Table 4.7

Tukey HSD Post-hoc Testing of Principal Component 2 ANOVA

Independent Variable	Comparison	*Mean Difference*	99.5% Confidence Interval Lower Bound – Upper Bound	
Large Instrumental	Large Vocal	- .264	- 1.813	1.285
	Alternative	**3.728***	1.068	6.388
	Large Inst/Voc	- 1.078	- 3.442	1.286
	Large Ens/Alt	1.386	- 1.654	4.427
Large Vocal	Alternative	**3.992***	1.180	6.804
	Large Inst/Voc	- .814	- 3.347	1.719
	Large Ens/Alt	1.650	- 1.524	4.825
Alternative	Large Inst/Voc	**- 4.806***	- 8.137	- 1.475
	Large Ens/Alt	- 2.342	- 6.183	1.499
Large Inst and Voc	Large Ens/Alt	2.464	- 1.177	6.107

Results Significant at p < .006

Principal Component 3 – Peer Musical Engagement and Social Interaction

To examine what significant differences existed in the Peer Musical Engagement and Social Interaction motivation between groups of students enrolled in various high school music electives, I conducted a one-way between-groups ANOVA. The null hypothesis was that no significant differences would exist in the Peer Musical

Engagement and Social Interaction motivation of participants enrolled in the different music elective courses. Results from the ANOVA revealed significant differences existed in participants' mean Peer Musical Engagement and Social Interaction motivation scores [F (4, 1686) = 26.601, p < .001]. As a result, I rejected the null hypothesis. The effect size, calculated using *eta* squared [eta^2 = .06], was determined to be medium (Pallant, 2010). Tukey HSD post-hoc testing with a Bonferroni adjusted a = .006 revealed that participants enrolled in large vocal ensembles [M = 39.29, SD = 7.03, p = .003] were motivated significantly more by Peer Musical Engagement and Social Interaction than participants enrolled large instrumental ensembles [M = 37.84, SD = 6.69] and participants enrolled in a large ensemble and alternative course concurrently [M = 35.92, SD = 7.25, p < .001].

In addition, participants in large instrumental and vocal ensembles simultaneously [M = 39.22, SD = 6.88, p = .004] were motivated significantly more by Peer Musical Engagement and Social Interaction than students enrolled in large ensemble and alternative courses concurrently. Finally, students enrolled solely in alternative music courses [M = 32.27, SD = 7.38] were motivated significantly less than large instrumental ensemble members [p < .001], large vocal ensemble members [p < .001], large instrumental and vocal ensemble members [p < .001], and students enrolled in a large ensemble and alternative music course concurrently [p = .002] (see Table 4.8).

Principal Component 4 – Musical Self-Concept

To examine what significant differences existed in the Musical Self-Concept motivation between groups of students enrolled in various high school music elective

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Table 4.8

Tukey HSD Post-hoc Testing of Principal Component 3 ANOVA

Independent Variable	Comparison	*Mean Difference*	99.5% Confidence Interval Lower Bound – Upper Bound	
Large Instrumental	Large Vocal	**- 1.449***	- 2.830	- .067
	Alternative	**5.575***	3.200	7.949
	Large Inst/Voc	- 1.380	- 3.490	.730
	Large Ens/Alt	1.920	- .793	4.635
Large Vocal	Alternative	**7.024***	4.515	9.532
	Large Inst/Voc	.068	- 2.191	2.328
	Large Ens/Alt	**3.370***	- .537	6.202
Alternative	Large Inst/Voc	**- 6.955***	- 9.928	- 3.982
	Large Ens/Alt	**- 3.654***	- 7.082	- .225
Large Inst and Voc	Large Ens/Alt	**- 3.301***	.050	6.552

*Results Significant at p < .006

courses, I conducted a one-way between-groups ANOVA. The null hypothesis was that

no significant differences would exist in the Musical Self-Concept motivation of

participants enrolled in the different music elective courses. Results from the ANOVA

revealed significant differences existed in participants' mean Musical Self-Concept

motivation scores [$F(4, 1686) = 12.047, p < .001$]. As a result, I rejected the null

hypothesis. The effect size, calculated using *eta* squared [$eta^2 = .03$], was determined to

be small (Pallant, 2010). Tukey HSD post-hoc testing with a Bonferroni adjusted $a =$

.006 revealed that participants enrolled in large instrumental ensembles [$M = 38.36, SD =$

7.72, *p.* < .001] were motivated significantly more by Musical Self-Concept than

participants enrolled solely in an alternative music course [$M = 29.52, SD = 6.35$].

Participants enrolled solely in a large vocal ensemble [$M = 31.88, SD = 7.37, p =. 002$]

were motivated significantly less by Musical Self-Concept than participants enrolled in

large instrumental and large vocal ensembles simultaneously [$M = 35.02$, $SD = 7.30$].

Students enrolled solely in an alternative music course were motivated significantly less

by Musical Self-Concept than participants enrolled solely in a large instrumental

ensemble, large instrumental and vocal ensemble concurrently, and large ensemble and

alternative music courses concurrently [$M = 34.50$, $SD = 7.40$, $p < .001$]. Participants

enrolled simultaneously in large instrumental ensemble and large vocal ensemble courses

were motivated significantly more [$p < .001$] by Musical Self-Concept than participants

enrolled in all other music courses with the exception of students enrolled in large

ensemble and alternative music courses. Finally, participants enrolled in large ensemble

and alternative music courses concurrently were motivated significantly more [$p < .001$]

by Musical Self-Concept than participants enrolled solely in an alternative music course

(see Table 4.9).

Table 4.9

Tukey HSD Post-hoc Testing of Principal Component 4 ANOVA

Independent Variable	Comparison	*Mean Difference*	99.5% Confidence Interval Lower Bound – Upper Bound	
Large Instrumental	Large Vocal	- .814	- .627	2.255
	Alternative	**3.170***	.697	5.650
	Large Inst/Voc	**- 2.330***	- 4.532	- .129
	Large Ens/Alt	- 1.803	- 4.635	1.027
Large Vocal	Alternative	2.359	- .2575	4.977
	Large Inst/Voc	**- 3.144***	- 5.503	- .786
	Large Ens/Alt	- 2.617	- 5.573	.337
Alternative	Large Inst/Voc	**- 5.504***	- 8.606	- 2.403
	Large Ens/Alt	**- 4.977***	- 8.554	- 1.401
Large Inst and Voc	Large Ens/Alt	.527	- 2.864	3.918

*Results Significant at $p < .006$

Principal Component 5 – Competition and Ego in Music

To examine what significant differences existed in the Competition and Ego in Music motivation between groups of students enrolled in various high school music electives, I conducted a one-way between-groups ANOVA. The null hypothesis was that no significant differences would exist in the Competition and Ego in Music motivation of participants enrolled in the different music elective courses. Although MANOVA significance testing revealed significant between-group differences for Principal Component Five, MANOVA testing was done with an alpha level of $a = .01$. Results from the follow-up ANOVA also revealed significant differences existed in participants' mean Musical Competition and Ego motivation scores [$F (4, 1686) = 5.189$, $p. < .001$]. The effect size, calculated using *eta* squared [$eta^2 = .01$], was determined to be small (Pallant, 2010). However, Tukey HSD post-hoc testing with a Bonferroni adjusted $a = .006$ revealed no differences were truly significant at this adjusted level (see Table 4.10). As a result, I failed to reject the null hypothesis.

Principal Component 6 – Musical Mastery and Affect

To explore the significant differences that existed in the Musical Mastery and Affect motivation between groups of students enrolled in various high school music electives, I conducted a one-way between-groups ANOVA. The null hypothesis was that no significant differences would exist in the Musical Mastery and Affect motivation of participants enrolled in the different music elective courses. Results from the ANOVA revealed significant differences existed in participants' mean Musical Mastery and Affect motivation scores [$F (4, 1686) = 12.237$, $p < .001$]. Therefore, I rejected the null

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Table 4.10

Tukey HSD Post-hoc Testing of Principal Component 5 ANOVA

Independent Variable	Comparison	*Mean Difference*	99.5% Confidence Interval Lower Bound – Upper Bound	
Large Instrumental	Large Vocal	1.442	- .100	2.985
	Alternative	1.194	- 1.456	3.845
	Large Inst/Voc	- .740	- 3.096	1.615
	Large Ens/Alt	- 1.601	- 4.632	1.429
Large Vocal	Alternative	- .248	- 3.049	2.553
	Large Inst/Voc	- 2.183	- 4.707	.340
	Large Ens/Alt	- 3.044	- 6.207	.1189
Alternative	Large Inst/Voc	- 1.934	- 5.254	1.384
	Large Ens/Alt	- 2.795	- 6.623	1.032
Large Inst and Voc	Large Ens/Alt	- .861	- 4.490	2.768

Results Significant at p < .006

hypothesis. The effect size, calculated using *eta* squared [eta^2 = .03], was determined to be small (Pallant, 2010). Tukey HSD post-hoc testing with a Bonferroni adjusted *a* = .006 revealed that participants enrolled in a large instrumental ensemble [*M* = 35.16, *SD* = 4.33, *p.* < .001] were motivated significantly less by Musical Mastery and Affect than participants enrolled in a large instrumental ensemble and large vocal ensemble concurrently [*M* = 37.55, *SD* = 3.54] and participants enrolled in a large ensemble and alternative music course [*M* = 37.03, *SD* = 3.76]. In addition, participants enrolled solely in a large vocal ensemble [*M* = 35.54, *SD* = 4.81, *p.* < .001] were motivated significantly less by Musical Mastery and Affect than participants enrolled in a large instrumental ensemble and large vocal ensembles simultaneously. Students enrolled only in an alternative music course [*M* = 36.08, *SD* = 4.37] did not differ significantly from participants in any other group (see Table 4.11).

Table 4.11

Tukey HSD Post-hoc Testing of Principal Component 6 ANOVA

Independent Variable	Comparison	*Mean Difference*	99.5% Confidence Interval Lower Bound – Upper Bound	
Large Instrumental	Large Vocal	- .388	- 1.269	.492
	Alternative	- .928	- 2.441	.585
	Large Inst/Voc	**- 2.393***	- 3.738	- 1.048
	Large Ens/Alt	**- 1.875***	- 3.605	- .145
Large Vocal	Alternative	- .539	- 2.139	1.059
	Large Inst/Voc	**- 2.005***	- 3.446	- .564
	Large Ens/Alt	- 1.486	- 3.292	.318
Alternative	Large Inst/Voc	- 1.465	- 3.360	.4294
	Large Ens/Alt	- .947	- 3.132	1.238
Large Inst and Voc	Large Ens/Alt	.518	- 1.553	2.590

Results Significant at p < .006

Principal Component 7 – Music Teacher Relationships and Course Content

To determine the nature of the significant differences that existed in the Music Teacher Relationships and Course Content motivation between groups of students enrolled in various high school music electives, I conducted a one-way between-groups ANOVA. The null hypothesis was that no significant differences would exist in the Music Teacher Relationships and Course Content motivation of participants enrolled in the different music elective courses. Results from the ANOVA revealed significant differences existed in participants' mean Music Teacher Relationships and Course Content motivation scores [$F (4, 1686) = 20.663, p < .001$]. As a result, I rejected the null hypothesis. The effect size, calculated using *eta* squared [$eta^2 = .05$], was determined to be small to medium (Pallant, 2010). Tukey HSD post-hoc testing with a Bonferroni adjusted $a = .006$ revealed that participants enrolled in a large instrumental

ensemble [*M* = 16.83, *SD* = 3.45, *p* < .001] or a large vocal ensemble [*M* = 16.66, *SD* = 4.21, *p* < .001] were motivated significantly less by Music Teacher Relationships and Course Content than participants enrolled solely in an alternative music course [*M* = 18.35, *SD* = 2.99], participants enrolled in both large instrumental and vocal ensembles [*M* = 19.12, *SD* = 2.74] and participants enrolled in a large ensemble and alternative music course concurrently [*M* = 18.32, *SD* = 3.13]. No other significant differences were observed between groups (see Table 4.12).

Table 4.12

Tukey HSD Post-hoc Testing of Principal Component 7 ANOVA

Independent Variable	Comparison	*Mean Difference*	99.5% Confidence Interval Lower Bound – Upper Bound	
Large Instrumental	Large Vocal	.165	- .552	.883
	Alternative	**- 1.526***	- 2.759	- .293
	Large Inst/Voc	**- 2.294***	- 3.389	- 1.198
	Large Ens/Alt	**- 1.493***	- 2.902	- .084
Large Vocal	Alternative	**- 1.691***	- 2.994	- .389
	Large Inst/Voc	**- 2.459***	- 3.633	- 1.128
	Large Ens/Alt	**- 1.659***	- 3.130	- .188
Alternative	Large Inst/Voc	- .767	- 2.311	.775
	Large Ens/Alt	.032	- 1.747	1.812
Large Inst and Voc	Large Ens/Alt	- .800	- .887	2.487

*Results Significant at p < .006

Principal Component 8 – Musical Background and Home Environment

To further examine the significant differences that existed in the Musical Background and Home Environment motivation between groups of students enrolled in various high school music electives, I conducted a one-way between-groups ANOVA. The null hypothesis was that no significant differences would exist in the Musical

Background and Home Environment motivation of participants enrolled in the different music elective courses. Results from the ANOVA revealed significant differences existed in participants' mean Musical Background and Home Environment motivation scores [F (4, 1686) = 10.180, $p < .001$], and so I rejected the null hypothesis. The effect size, calculated using *eta* squared [$eta^2 = .02$], was determined to be small (Pallant, 2010). Tukey HSD post-hoc testing with a Bonferroni adjusted $a = .006$ revealed that participants enrolled in a large instrumental ensemble and a large vocal ensemble concurrently [$M = 12.46$, $SD = 3.59$, $p < .001$] were motivated significantly more by their Musical Background and Home Environment than participants enrolled solely in a large instrumental ensemble [$M = 10.66$, $SD = 3.53$], a large vocal ensemble [$M = 10.80$, $SD = 3.72$], or an alternative music course [$M = 9.84$, $SD = 3.73$] (see Table 4.13).

Table 4.13

Tukey HSD Post-hoc Testing of Principal Component 8 ANOVA

			99.5% Confidence Interval	
Independent Variable	Comparison	*Mean Difference*	Lower Bound –	Upper Bound
Large Instrumental	Large Vocal	- .144	- .869	.581
	Alternative	.811	- .435	2.057
	Large Inst/Voc	**- 1.805***	- 2.919	- .698
	Large Ens/Alt	- .160	- 1.585	1.264
Large Vocal	Alternative	.955	- .361	2.272
	Large Inst/Voc	**- 1.661***	- 2.847	- .474
	Large Ens/Alt	- .016	- 1.503	1.470
Alternative	Large Inst/Voc	**- 2.616***	- 4.117	- 1.056
	Large Ens/Alt	- .9718	- 2.771	.827
Large Inst and Voc	Large Ens/Alt	1.644	- .061	3.351

*Results Significant at p < .006

Research Question Three: Do the Motivational Factors Cited by Students Differ

Significantly by Sex?

To answer research question three, I referenced the same SPSS statistical output generated after the factorial MANOVA used to answer research question two. This time, however, I compared principal component scores between male and female participants. The null hypothesis for research question three was that no significant differences would exist in the motivational factors that influence male and female student musicians. Because it was the same statistical analysis, all assumptions and assumption violations held true when answering this research question. Therefore, I used the more robust Pillai's trace to determine the significance of the MANOVA results and also selected a more conservative alpha level of $a = .01$ for significance testing.

Results

Results from the factorial MANOVA indicated that significant differences existed among the motivational factors that influenced male and female high students participation in elective high school music courses [*Pillai's Trace* = .050, F (8, 1648) = 10.921, $p < .001$, partial $\eta^2 = .050$]. Therefore, I rejected the null hypothesis. An examination of between-subject effects revealed that significant differences in the mean scores existed between groups of participants for PC2 and PC6 (see Table 4.14).

Further examination of these statistically significant differences revealed that female participants were influenced more by Approaching Musical Success and Avoiding Musical Failure Motivation (PC2) and Musical Mastery and Affect Motivation (PC6) than male participants (see Table 4.15).

Table 4.14

Multivariate Sex Effects

Dependent Variable	df	$df\ error$	M^2	Partial η^2	Sig.
PC1	1	1655	5.689	.000	.771
PC2	1	1655	1619.771	.017	**< .001***
PC3	1	1655	22.142	.000	.495
PC4	1	1655	264.802	.003	.022
PC5	1	1655	38.961	.000	.415
PC6	1	1655	426.289	.014	**< .001***
PC7	1	1655	16.751	.001	.256
PC8	1	1655	2.129	.000	.686

*Results Significant at p < .01

Table 4.15

Sex Means and Standard Deviations of Statistically Significant Principal Component Differences

Dependent Variable	Sex	*Mean*	*SD*	99% Confidence Interval Lower Bound – Upper Bound	
PC2	Male	30.89	7.83	29.84	31.94
	Female	33.88	7.52	32.87	34.88
PC6	Male	35.52	4.54	34.92	36.11
	Female	37.02	4.24	36.45	37.59

Research Question Four: Are Students' Motivations to Participate in School Music

Impacted by an Interaction Between Music Course Enrollment and Sex?

I used results from the same factorial MANOVA to answer research question

four. This time, however, I examined the interaction between music course enrollment

and sex. The null hypothesis for research question four was that no significant

interaction would exist between music course enrollment and sex. Because it was the

same statistical analysis, all assumptions and assumption violations held true when

answering this research question. Therefore, I used the more robust Pillai's trace to determine the significance of the interaction and also selected a more conservative alpha level of $a = .01$ for significance testing.

Results from the factorial MANOVA indicated that students' motivations to participate in school music courses are not impacted by a significant interaction between music course enrollment and sex [*Pillai's Trace* = .028, $F(32, 6604) = 1.465$, $p = .044$, partial $\eta^2 = .007$]. Therefore, I did not reject the null hypothesis (See table 4.16).

Table 4.16

Multivariate Interactions Between Course Enrollment and Sex

Dependent Variable	*df*	*df error*	M^2	Partial η^2	Sig.
PC1	4	1655	163.816	.006	.045
PC2	4	1655	83.119	.003	.218
PC3	4	1655	55.479	.003	.323
PC4	4	1655	47.034	.002	.445
PC5	4	1655	147.519	.006	.040
PC6	4	1655	46.238	.006	.043
PC7	4	1655	16.962	.003	.265
PC8	4	1655	10.475	.002	.522

No Significant Interactions Observed at p < .01

Research Question Five: Are Male or Female Students More Likely to Participate in

Alternative Music Classes?

To answer research question five, I used chi-square test for independence to explore the relationship between sex and choice of music course enrollment. The null hypothesis was that there would not be a relationship between sex and choice of music course enrollment. Assumptions for a chi-square test required that all observations are independent from one another and that the expected frequency in any cell is five or more (Pallant, 2010; Utts & Heckard, 2012,). Pallant (2010) recommended "that the expected

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frequency be at least 10" (p. 217) if chi-square is a two-by-two table of frequencies.

The data set did not violate either of these assumptions. All participants were classified

as either male or female and as either an alternative music course participant or not an

alternative music course participant. The minimum expected cell frequency in the

present data set was 80.22.

Results

Using Yate's correction for continuity to compensate for the overestimate of the

chi-square value generated by a two-by-two table (Pallant, 2010), I determined that there

appeared to be an association between sex and choice of music course. Therefore, I

rejected the null hypothesis. The proportion of males who enrolled in alternative music

courses was significantly greater than the proportion of females who enrolled in

alternative music courses [χ^2 (1, n = 1687) = 31.33, p < .001, phi = -.138]. Chi-square

statistics are provided in Table 4.17.

Table 4.17

Alternative Course Enrollment by Sex

	Male	Female
Alternative Music Course Non-Participant	n = 570 *Within Sex* = 83% *Within Chi-Square* = 38.3%	n = 920 *Within Sex* = 92% *Within Chi-Square* = 61.7%
Alternative Music Course Participant	n = 117 *Within Sex* = 17% *Within Chi-Square* = 59.4%	n = 80 *Within Sex* = 08% *Within Chi-Square* = 40.6%

Results were significant at p < .05

Chapter Four Summary

The purpose of the present investigation was to identify the motivational factors

that influence high school students to participate in elective music courses and determine

whether any motivational differences existed between different groups of high school music students. Statistical analyses revealed the presence of eight motivational factors, or principal components, that influence high school music students. I initially sought to identify and to examine any differences that existed between large ensemble participants and alternative music course participants. Data analysis revealed that not only were students enrolled in either large ensembles or alternative classes, but some were enrolled in multiple large ensembles or an alternative music course and large ensemble concurrently. The influence that seven of the eight motivational factors exerted on students varied significantly between the different groups. Analyses also revealed significant motivational differences existed between students enrolled in multiple music electives and students enrolled in only one music course, regardless of the course content. In addition, significant differences were present between male and female students. Both significant motivational differences between males and females resulted from higher mean female scores. In other words, females were influenced significantly more by Approach Musical Success and Avoid Musical Failure motivation and Musical Mastery and Affect motivation than male music students. Interestingly, students' motivations to participate in school music were not signficiantly impacted by interactions between music course enrollment and sex. Finally, the results indicated that the proportion of males who enrolled in alternative music courses was significantly greater than the proportion of females who enrolled in alternative music courses. This means that alternative music courses may be more likely to attract male students than female students. A comprehensive discussion of these findings will be presented in Chapter Five.

CHAPTER FIVE: DISCUSSION

This chapter presents a discussion of the results described in Chapter Four. I will begin by briefly reviewing the purpose of the study, the research questions that guided the study, and the research design utilized to answer the stated research questions. I will then discuss the findings of each research question independently before drawing overarching conclusions from the results. Following this discussion, I will conclude with recommendations for future research and discuss the implications this research has on the music education profession.

Review of Purpose, Research Questions, and Design

The purpose of this study was to determine whether students who elect alternative music classes were influenced by different motivational factors than traditional large ensemble participants, whether influential motivational factors differed by sex, and whether sex influenced participation in alternative music classes. The research questions used in this study were:

1. What motivational factors influence high school students' choices to enroll in and sustain participation in curricular music courses?

2. Do the motivational factors cited by students in alternative music courses differ significantly from students enrolled in traditional large ensemble courses?

3. Do the motivational factors cited by students differ significantly by sex?

4. Are students' motivations to participate in school music impacted by an interaction between music course enrollment and sex?

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5. Are male or female students more likely to participate in alternative music classes?

To answer the stated research questions, I distributed the MMQ to all students ($N =$ 1,859) enrolled in curricular music courses at a diverse sample of six rural and suburban high schools in Minnesota. Once the data were entered into SPSS, I conducted a PCA with oblimin rotation to examine correlations among the 60 MMQ motivation variables and reduce those variables into a smaller number of factors or principal components. I then grouped the motivation variables by factor and created composite "factor scores" (Tabachnick & Fidell, 2013, p. 655) by summing each participant's responses for all variables grouped within each factor. Next, I used these factor scores to compare group means through a factorial MANOVA. I further explored significant differences through follow-up one-way ANOVAs and Tukey post-hoc tests. Finally, I explored the relationship between sex and choice of music course enrollment through a chi-square test for independence. I will further discuss the results from the statistical analyses utilized to answer each research question respectively.

Discussion of Results

The sample from this study was drawn from six participating high schools. These schools had a combined enrollment of approximately 7,025 students. A total of 2,059 potential participants (music students) were invited to complete an MMQ. Based on these numbers, 29.3% of high students were enrolled in a music course at the time of the study. In addition, I did not sample students enrolled in music lecture style classes (e.g., music theory, History of Rock and Roll, etc.), and therefore, the percentage may have been higher if these classes were offered and taken by students not enrolled in another

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music elective concurrently. This percentage is consistent with previous longitudinal

enrollment studies that have demonstrated that a relatively stable 30% of high school

students enroll in a music course (Elpus, 2014) and bring into question claims of

widespread declining music enrollment (Elpus & Abril, 2011; Kratus, 2007; Williams,

2011). However, the sample from the present study was not a truly stratified or random,

and was drawn only from schools that offered both large ensemble and alternative music

courses. Therefore, the results should be interpreted with some caution and may not be

representative of nation-wide high school music enrollment figures.

A total of 1,714 participants' responses were included in the statistical analyses.

Within this sample, 1,687 (98.4%) participants provided sex identification information on

the MMQ. The sample included 687 (40.1%) male participants and 1,000 (58.3%)

female participants. This sex distribution supports findings reported by Elpus and Abril

(2011) who found that in 2004, 61.1% of a nationally representative sample of high

school senior music students were female. Although the present study included

participants from grades nine through twelve, the disproportionate enrollment of male

and female students in high school music courses seems to have remained consistent over

the past several decades (Elpus & Abril, 2011; Stewart, 1991). This is perhaps also

related to the higher proportion of young female students who engage in music learning

opportunities prior to adolescence (Hargreaves et al., 1995). After all, successful music

learning and performing experiences have been shown to strengthen one's musical self-

efficacy beliefs and promote sustained motivation to participate in music (McCormick &

McPherson, 2003; Ritchie & Williamon, 2011).

Additionally, the mean age of participants was $M = 15.9$ years. Because all music students attending the participating schools were invited to participate in this study and the response rate was 83.24%, it would seem that the majority of music students were in the ninth and tenth grade. This supports previous research that found the average high school music student remains enrolled for 2.4 years (Stewart, 1991), and less than 10% of students remain enrolled in music for the entire four years of high school (Elpus, 2014). The reasons behind students' choices to discontinue music participation as they grow older may include loss of interest and scheduling conflicts with other courses. However, this study revealed that schools offering alternative music courses often have limited opportunities for continued instruction. Instrumental and vocal ensemble students often have the option of progressing to a more advanced ensemble or taking on a more challenging role within the ensemble. A student in a beginning guitar class, however, would benefit little from repeating the course again. Without a sequential curriculum including multiple years of alternative course offerings, many interested and aspiring student musicians may be forced to discontinue music study in high schools.

What motivational factors influence high school students' choices to enroll in and sustain participation in curricular music courses?

This study was designed to explore the motivational factors that influence participation in high school music courses. Each person possesses a motivational engine fueled by various unique experiences, beliefs, and influences (Higgins, 2012). A person's motivation to engage with school music is impacted by external long-term and situational influences that interact with intraindividual long-term and situational influences (Smith, 2011). Although each person's life experiences and beliefs are

unique, it should be expected that students choosing to study music in school possess similar motivational influences to some extent.

The MMQ contained 60 variables adapted from previous musical motivation measurement tools (Asmus & Harrison, 1990; Campbell, 2009; Schmidt, 2005; Svengalis, 1978). Prior to data analyses, these 60 variables represented 13 distinct motivation categories including music ability and self-concept, musical background, classroom environment, affect for music, mastery orientation, intrinsic orientation, individual orientation, cooperative orientation, ego orientation, competition orientation, achieve success orientation, avoid failure orientation, and musical possible selves. After conducting a PCA with oblimin rotation and reliability tests, eight principal components were extracted from the data set representing 57 of the 60 variables and accounting for 56.95% of the total variance in participants' responses. Interestingly, although some of the previously established motivation categories were included in their entirety within a principal component, none of these categories were extracted as stand-alone factors. In other words, variables from previously established musical motivation categories were found to be so strongly related with variables from other categories that they grouped or combined into newly established music motivation factors.

The first factor (PC1) found to influence student motivation and participation in school music was *Musical Enjoyment and Future Musical Engagement*. Factor one accounted for 19.75% of the overall variance in participants' responses. An examination of the variables that grouped in PC1 revealed that music students who enjoy music making and creating activities likely also possess visions of future engagement with music and music making. Visions of future musical engagement may be defined by a

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specific period in one's life (e.g., adulthood) or may be less narrowly defined (e.g., in the future). Regardless of the envisioned timeframe, the variables grouped under PC1 support previous research that link enjoyment of musical activities and visions of musical possible selves with sustained interest, participation, and motivation in music (Campbell, 2009; Gouzouasis, Henrey, & Belliveau, 2008; Hewitt & Allan, 2012; Schnare et al., 2012).

The second motivational factor (PC2) to emerge from the PCA was *Approach Musical Success and Avoid Musical Failure*, and it accounted for 11.25% of the variance in participants' responses. Beliefs of what constitute musical successes and failures certainly vary from individual to individual. For example, one student may view musical success as cleanly performing an orchestral excerpt four metronomic beats faster than done previously. Others may view simply being part of an award winning marching band as musical success, regardless of his or her individual contribution to the group. The variables grouped under PC2 did not necessarily reflect these individualized success and failure beliefs. Instead, approaching musical success and avoiding musical failure in the context of the present study meant that students worked to obtain satisfactory (or better) academic marks or grades in music courses and sought the approval of their music teacher(s). Conversely, obtaining poor grades and receiving teacher disapproval, whether that disapproval manifested concretely or was merely perceived by students, constituted the musical failures that students worked to avoid.

Both approaching musical success and avoiding musical failure would be viewed primarily as the external situational motivational influences of student evaluation and teacher feedback as defined by Smith (2011). Given that music teachers often provide

critical and disapproving feedback as a means of helping students improve, that this type of feedback can negatively influence student motivation (Yarbrough & Price, 1989), and that struggling student musicians often seek approval from their music teachers more frequently than successful students (Costa-Giomi et al., 2005), the variance in participants' PC2 responses could be expected. Interestingly, the current study did not investigate the grading practices exercised in the sampled classrooms. However, knowing that grading practices in high school music courses can vary, and that many high school music teachers include attendance, participation, attitude, and behavior in student grades (Lehman, 1998), approaching musical success and avoiding musical failure could be very different from one classroom to the next.

Accounting for 8.91% of the overall variance in participants' responses was the third motivational factor (PC3), *Peer Musical Engagement and Social Interaction*. PC3 represented the influence of social interaction on students' motivation to participate in music. Researchers have demonstrated the powerful influence that social interaction has on students' choices to participate in music (Hewitt & Allan, 2012; Siebenaler, 2006). This is even true outside of school settings. For example, Clawson (1999) found that male rock musicians often formed their first bands with friends prior to owning or knowing how to play instruments. Although many of the students in the present study had engaged in group music making with their peers and friends for years prior to data collection, it is unclear if the same was true about students enrolled in alternative music courses. Perhaps some of these students chose to enroll in alternative music courses with their friends, but the majority of these classes did not involve group interaction or music making. Many alternative music course students were learning guitar and keyboard

through teacher-led instruction and individual practice. Others were composing electronic music on computers and were completely disconnected from their peers as they listened to their compositions through headphones. Little would prevent these students from interacting musically with others outside of the classroom, but their in-school music making and learning were primarily individual experiences.

The fourth motivational factor (PC4) that influenced student motivation to participate in curricular music courses was *Musical Self-Concept*. This factor accounted for 5.39% of the variance in participants' responses. This factor reflected how students perceive their musical abilities and achievements in relation to their peers, classmates, and other humans in general. Researchers have shown that students with high self-concept in music typically have parents who support their musical activities, have previous music-making experience, and were successful in previous musical tasks or activities (Asmus & Harrison, 1990; Sichivista, 2007). Additionally, how students view or perceive their musical abilities is "a principal ingredient in determining [their] propensity for future striving at a [musical] task" (Asmus & Harrison, 1990, p. 259). Given the diversity in students' home environments and access to music learning and making activities throughout their childhood, variance in PC4 responses could be expected.

Motivational factor number five (PC5) was *Musical Competition and Ego*, and this factor accounted for 4.18% over the overall variance in participants' responses. This factor demonstrated that student musicians were influenced either positively or negatively by musical situations or activities they perceive as competitive. Kao (2011) described this dichotomy as a "two-edged sword…[that] can lead to skill improvement, good work

habits, and positive self-concept, but also avoidance of challenge, undue stress, jealousy, [and] feelings of inadequacy" (p. 31). For some students, feeling successful in this competition may feed their egos. This can serve as intrinsic motivation to continue engaging with and learning music, continue competing musically, and continue supplying their egos with beliefs of musical superiority. It can also cause students to set unrealistic goals, develop competitive and adversarial relationships with their classmates, and create excuses when the do not succeed in competition (Austin, 1990). Furthermore, few musicians in a classroom will establish themselves as truly elite performers. Therefore, competition and ego motivation may have a negative influence on "the large majority of…[music] participants" (p. 23).

Principal component six (PC6), *Musical Mastery and Affect*, represented 2.7% of the overall variance in participants' MMQ responses. This factor explained the influences that affective responses to music have on students' motivation. In other words, the emotions a student feels when hearing or performing music can generate motivation to continue working and improving to reach one's goals and fullest musical potential. While the variables grouped into PC5 represented performance goals (goals based on social comparisons), PC6 included only the mastery goals students set to achieve specific musical tasks (Smith, 2011). Also, because goal orientations are directional, students reporting strong influences from PC5 variables were likely more concerned with avoiding musical failure (Austin, 1990). Conversely, students reporting stronger influences from PC6 variables were likely more concerned with approaching musical success, not necessarily to obtain good grades or positive teacher feedback, but to experience positive affective responses to music through performance or musical engagement.

Music Teacher Relationships and Course Content was the seventh motivational factor (PC7) revealed from the PCA and accounted for 2.49% of the overall variance in participants' responses on the MMQ. Researchers have demonstrated that student-teacher relationships play a critical role in sustaining motivation in music (Davidson et al., 1998; Sloboda & Howe, 1992). Additionally, researchers have shown that the course content or the specific musical tasks students are asked to complete, and the value students place on those tasks, influence motivation in music (Abramo, 2010; Eccles et al., 1993; Hewitt & Allan, 2012; Kuzmich, 1991). An examination of the variables that loaded under PC7 suggested that these influences are highly correlated. This seems like a natural pairing as music teachers are typically in charge of designing the course content and assigning or creating the various musical tasks required of students. It is important to mention that the results of this study are bound by the specific time at which the data were collected. Some students had developed relationships with teachers over a period of months or years at the time of data collection, and others had only been enrolled in a specific teacher's class for a few weeks. Naturally, this may have impacted the variance in some students' PC7 responses. However, this should not be considered a limitation. Many students enrolling in alternative music courses may be exploring music instruction and interacting with music teachers for the first time since elementary school. For these students, it is likely that student-teacher relationships would play a different influential in their motivation to enroll in music courses.

The eighth and final motivational factor (PC8), *Musical Background and Home Environment*, explained 2.26% of the overall variance in participants' MMQ responses. This factor confirmed previous researchers' findings that musically engaged parents, a

musical home environment, and access to music instruction at a young age ultimately

influence students' motivation to participate in curricular music (Brand, 1986; Davidson

et al., 1995; McPherson, 2009; Sloboda & Howe, 1991; Zdinski, 1996). Although the

majority of parents engage in musical experiences with their children at young ages

(Custodero et al., 2003), children need added musical support as they approach

adolescence. This study did not examine the socio-economic status or living

arrangements of participants' families, but these may have accounted for some of the

variance in PC8 scores. Many students have parents who are unable to afford additional

music lessons, instrument rental fees, or who are too busy working to provide

transportation to and from music lessons or performances. Additionally, some home

environments (e.g., apartment complexes) are not conducive to musical study due to

noise restrictions. Such living arrangements would not be considered musically

influential home environments. It is easy to understand how PC8 could either positively

or negatively influence students' motivation to engage in music learning opportunities.

Do the motivational factors cited by students in alternative music courses

differ significantly from students enrolled in traditional large ensemble courses?

Understanding how the MMQ measured music students' motivation is critical in

answering research questions two and three. The MMQ asked participants to rate their

levels of agreement/disagreement with 60 music motivation statements derived from the

related literature. Therefore, all MMQ statements (with the exception of Q57, Q40, and

Q32) were used in statistical comparisons. The significant differences found in this study

did not necessarily represent the presence or absence of motivational factors, but instead,

represented differences in the strength of influence eight motivational factors had on high school music students' choices to enroll in various curricular music courses.

The simplest or most direct answer to research question two is yes. Students enrolled in alternative music courses, either as their sole elective music course or in conjunction with another music elective, were influenced differently than large ensemble participants by some of the motivational factors represented in this study. However, a simple yes or no answer does little to advance the understanding of music student motivation. To best understand the nature of student motivation, I will discuss the unique motivational differences that were observed in each of the five participant groups. In doing so, I hope the information will be useful not only readers with interests in alternative music courses and students, but also readers who wish to better understand what motivates traditional high school large ensemble students.

Large instrumental ensemble participants.

In the present study, large instrumental ensemble participants were enrolled in concert band, orchestra, and curricular pep band courses. Although the MMQ asked participants to identify only the music courses that they were taking for academic credit at the time of data collection, numerous students also indicated that they were participants in extracurricular or co-curricular music activities (e.g., jazz ensemble; drumline; piano lessons, etc.). The enjoyment that large instrumental ensemble participants received from music making and the visions they possessed of future musical engagement were similar to students enrolled in large vocal ensembles and students enrolled in alternative music classes. However, large instrumental ensemble students were influenced significantly less by music making pleasure and future musical engagement than students enrolled in

multiple music elective courses, regardless of the musical content of those courses. In other words, students who enroll in multiple music courses concurrently may enjoy music making more than students enrolled solely in band or orchestra. This can lead to sustained motivation as students work towards future lives that may contain some form of musical engagement.

Large instrumental ensemble students were motivated significantly more by peer musical engagement and social interaction than students enrolled in alternative music courses. Given that band and orchestra are courses focused on building musical skills through group performance and that social interaction has been previously cited as a strong motivational force in large ensembles (Hewitt & Allan, 2012; Werpy, 1995), this finding was not surprising. Interestingly, large instrumental ensemble students were motivated significantly less by peer musical engagement and social interaction than large vocal ensemble students. One possible explanation for this finding might be that friendships change over time. While friends often choose to enroll in instrumental music together at young ages, this does not necessarily mean that they remain friends throughout adolescence. Because large instrumental ensemble membership in high schools typically necessitate prerequisite performance skills (Williams, 2011), high school students with little musical training may gravitate toward large vocal ensembles as a means of socializing and making music with their friends.

Students enrolled in large instrumental ensembles were influenced similarly by musical mastery and affect motivation as were large vocal ensemble students and alternative music course participants. However, much like influence of PC1, large instrumental ensemble students were motivated significantly less by musical mastery and

affect than students enrolled in two or more music electives concurrently. Although

one could interpret this finding to mean that band and orchestra students are less

motivated by musical mastery and affect, a more plausible explanation would be that

students who are moved by the emotion music creates and who strive to better their

musicianship so that they can create or perform music, are motivated to take multiple

music elective courses.

Finally, nearly identical findings emerged when music teacher relationships and

course content motivation were compared between groups. Large instrumental ensemble

students reported music teacher relationship and course content motivation to be

significantly less influential in their decisions to enroll in music than students enrolled in

multiple music courses. Interestingly, they were also significantly less motivated by

teacher relationships and course content than alternative music course students. Given

that alternative music students have likely had less time to develop meaningful and

lasting relationships with their teachers, I suspect that this significant difference was

created by the course content itself. Large instrumental ensemble students may be less

influenced or less interested in learning and performing wind band or string orchestra

music than alternative music course students are in learning and performing the genres or

styles of music studied in their respective courses. This would certainly support

researchers who claim that large ensemble music is losing or lacks relevance in students'

lives (Kratus, 2007; Williams, 2011). Additionally, this would support the idea that

alternative music courses can generate student interest in music learning by providing

opportunities for students to "experience a different type of musicality than is

traditionally offered, engage in genres they prefer, and participate in music in ways they find valuable" (Abramo, 2010).

Large vocal ensemble participants.

Large vocal ensemble participants in the present study were members of either exclusively male, female, or mixed choirs at their respective high schools. Peer musical engagement and social interaction was found to be a very strong, perhaps even the strongest, motivational influence on large vocal ensemble students. This finding was consistent with previous research. For example, Siebenaler (2006) found that a large number of high school students participate in choir "because it is where their friends are" (p. 6). While previous research has shown that members of all large ensembles place importance "on the social aspects of their ensemble membership" (Adderley, Kennedy, & Berz, 2003, p. 204), the results from this study demonstrated that, with the exception of students enrolled in large vocal and instrumental ensembles concurrently, large vocal ensemble participants were influenced significantly more by peer musical engagement and social interaction motivation than all other high school music participants. Given that no significant differences existed between large vocal ensemble participants and students enrolled in both large vocal and instrumental ensembles, peer musical engagement and social interaction could be said to be strongly influential in motivating all large vocal ensemble students, regardless of whether they chose to enroll in additional elective music courses or not.

Large vocal ensemble participants were influenced significantly less by musical self-concept motivation than their peers enrolled in both vocal and instrumental large ensembles simultaneously. This was also true with choir students' musical mastery and

affect motivation. In other words, only students who chose to enroll in multiple, traditionally classical large performance ensembles were motivated more than choir students to continue refining their musical skills so that their individual contributions to their performance groups was of a quality comparable with their peers.

Finally, music teacher relationships and course content motivation was found to be significantly less influential for large vocal ensemble participants than all other music students with the exception of large instrumental ensemble participants. This would seem to suggest that perhaps large vocal ensemble students were not motivated as strongly by the music they performed in school (course content) as other music students. However, given that musical mastery was also a weaker influence on choir students, some may enroll in vocal ensembles because they are not often asked to work on or master challenging or difficult music. This contradicts previous research that found choral students to be motivated by musical literature that is "challenging but attainable with effort" (Stamer, 2009, p. 27). It is also possible that the significant differences found in the present study could simply mean that vocal ensemble students perceived their success in class to require less effort than other music students. Given that the mean age of this study's sample was $M = 15.9$ years, it is possible that many vocal ensemble students had not yet advanced to choirs working on technically demanding repertoire.

Alternative music course participants.

The alternative music participants included in this study were enrolled in guitar classes, electronic keyboard classes, music technology courses focused on creating electronic music with computer software, and a vocal music course designed to help student develop popular music singing techniques and perform popular music as

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vocalists. Alternative music course participants were influenced significantly less by approaching musical success and avoiding musical failure motivation than students enrolled in large instrumental ensembles, large vocal ensembles, and students enrolled in large vocal and instrumental ensembles concurrently. This finding was intriguing considering that alternative music course participants were influenced significantly more by teacher relationships and course content motivation than band, choir, and orchestra students. In other words, alternative music course students were not necessarily motivated to receive good grades in music courses or obtain their music teacher's approval. Instead, they were motivated by the musical activities offered in their classes and teachers who nurtured their musical growth by allowing them to explore their musical interests. Green (2002) explained that popular musicians rarely learn music and acquire musical skills through a disciplined course of study. Instead, they often engage in music learning by studying music that interests them and do so at a pace and in a manner that they deem appropriate. If one were to view alternative music course participants as aspiring popular musicians, this could help to explain why alternative music course students are less concerned with approaching musical success and avoiding musical failure than their peers. These findings also support previous researchers' claims that alternative music courses are a way to provide more meaningful and relevant music learning experiences to a wider or different population of students (Cohen & Roudabush, 2010; Kratus, 2007; Tobias, 2010).

Alternative music course students were significantly less influenced by musical self-concept motivation than large instrumental course students and students enrolled in multiple music courses. Self-concept and feelings of self-efficacy in music are derived

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largely from previous experience with music learning and successful music performance (Ritchie & Williamon, 2011; Sichivista, 2007). Students who experienced prior musical success are often motivated to engage with music-making again. Additionally, female students often possess higher musical self-efficacy than male students (Ritchie & Williamon, 2011). Considering many alternative music course students likely received little formal music training or engaged in few musical performances after elementary school, and male students were more likely to enroll in alternative music courses than female students, it is not surprising that alternative music course participants would possess lesser musical self-concepts than their formally trained and predominantly female peers.

Finally, perhaps the most significant finding involving alternative music course participants was that they were influenced less by peer musical engagement and social interaction motivation than all other groups of students sampled in this study. Researchers have shown that friendship and social relationships are often the primary influences that lead young popular musicians to form music groups together. It is even more important than musical skill for many young popular musicians (Clawson, 1999). This would seem to suggest that, at least in the schools participating in this study, there was some disconnect between the music making in alternative music courses and students' music engagement outside of schools. In my very limited exposure to alternative music courses sampled in this study, students were engaged with music learning and making primarily as an individualized activity. They were playing guitars or keyboards individually (through group instruction) or creating music on computers and listening to their compositions through headphones. I am not implying that alternative

music course students failed to engage in meaningful music learning activities. Instead, it would appear that either alternative music course participants were so strongly motivated by the course content that social motivation played a relatively insignificant role in their course enrollment choices, or there may still be a population of prospective musicians attending the participating schools who have forgone and who will continue to bypass music courses until they are able to study the styles of music that interest them in a way that allows them to interact with their friends through music.

Large instrumental and vocal ensemble participants.

Within the context of this study, large instrumental and vocal ensemble participants were enrolled in a male, female, or mixed choir and either a concert band or a string orchestra course concurrently at the time of data collection. Large instrumental and vocal ensemble participants were influenced significantly more by music making pleasure and future musical engagement motivation than their peers enrolled solely in a large instrumental or vocal ensemble course. Due to their extensive involvement and training in music, many of these students were able to envision future lives as amateur or professional musicians, subsequently fueling their motivation to sustain engagement with music. Interestingly, these students were influenced significantly less by peer musical engagement and social interaction than participants enrolled solely in large vocal ensembles and students enrolled in large ensembles and alternative music courses concurrently. Although they likely enjoyed interacting with their friends in music courses (Adderly et al., 2003), this motivating factor was not as influential on their choices to enroll in music courses as the enjoyment and affective responses they received from actual music making. This could also explain why these students reported music

teacher relationships and course content as being significantly more influential in their music participation than students enrolled in only band, choir, or orchestra.

The passion these students had for music making and improving their musical ability also manifested in musical mastery and affect motivation influences that were significantly greater than students enrolled in only one large performance ensemble. Their engagement with music likely began early in life as they reported being significantly more influenced by musical background and musical home environment motivation than their peers who were enrolled in only one music elective course. In other words, students enrolled in multiple music courses were more likely to have musical parents, grow up in musical home environments, and have access to music instruction at a young age, all characteristics previously demonstrated to influence and sustain motivation in music over time (Davidson & Borthwick, 2002; Davidson et al., 1995; Sloboda & Howe, 1991). The formal music instruction they received at a young age likely cultivated an interest in several music-learning experiences offered in high schools. It is not surprising that these students, in addition to students enrolled in large ensembles and alternative music courses concurrently, were also influenced significantly more by a positive musical self-concept than students who were enrolled in only one music course. Based on the findings from this study, it would appear that, regardless of the course content, most students who take multiple high school music courses possess stronger musical self-concepts and self-efficacy beliefs than their peers. This ultimately increases their motivation to continue learning and participating in school music programs.

Large performance ensemble and alternative course participants.

The final group sampled in the present study included students enrolled in either a large vocal or instrumental performance ensemble and an alternative music course concurrently. Much like students enrolled in two large performing ensembles, this group of student musicians was influenced significantly more by music making pleasure and future musical engagement motivation than students enrolled in only one large performance ensemble. Because this difference was also observed with students enrolled in large vocal and instrumental ensembles simultaneously, it would seem that, regardless of course content, students who enjoy music making and who envision making music in the future seek out multiple music learning opportunities in high schools. Although I did not conduct statistical analyses to compare the motivation of students attending high school in different geographic locations (e.g., rural, suburban), informal comparisons of the questionnaires revealed that the majority of students who enrolled in a large performance ensemble and an alternative music course attended one of the larger, suburban high schools in the sample. This was perhaps due to the fact that these schools had a larger selection of courses from which students could choose, more music staff to teach those courses, and multiple sections of alternative music courses. Conversely, many of the multiple music course participants attending rural schools had fewer alternative music course options to choose from and each course was typically offered only one period of the day. As a result, often students choosing to take multiple music courses in rural schools chose large instrumental and vocal classes that met during the same period of the day. Their teachers ultimately "shared" these students and allowed them to rotate the performance ensemble that they attended on a daily basis. It is unclear

whether or how additional opportunities to pursue alternative music courses in rural schools may impact students' course enrollment choices.

Although all participant groups were influenced significantly less by peer musical engagement and social interaction motivation than large vocal ensemble students, students enrolled in large ensembles and alternative music courses concurrently were influenced significantly more by this motivational factor than students enrolled only in alternative music courses and students enrolled in multiple large performing ensembles. In terms of motivation, this factor appeared to be what largely differentiated this group of musicians from students enrolled in multiple large performing ensembles. Both groups of participants were influenced strongly by music making pleasure and future musical engagement motivation, but students enrolled in large ensembles and alternative music courses concurrently were more strongly influenced by peer musical engagement and social interaction motivation. This would perhaps suggest that these students enroll in large ensembles because they get to interact and make music with their friends in large performance ensemble courses, and they enroll in alternative music courses to pursue music making and learning opportunities that they enjoy and are passionate about. This may also explain why this group of student musicians was influenced significantly more by music teacher relationships and course content motivation than students enrolled solely in band, choir, or orchestra. It remains unclear whether or not music enrollment choices for these students might change if their schools offered alternative music courses designed to allow students group music making opportunities.

Large ensemble and alternative music course participants were also influenced significantly more by musical self-concept motivation than their peers enrolled

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exclusively in alternative music courses. Again, musical self-concept motivation seemed to differentiate most groups of participants, with the exception of large vocal ensemble students, from alternative music course participants. Many students involved in large instrumental performance ensembles have had years of musical training and performing experience by the time they reach high school. This experience is critical in developing a positive musical self-concept. Because many of the students enrolled in large ensembles and alternative music courses simultaneously possess this prior musical training and experience, it is not surprising that their musical self-concepts are significantly higher than many of the beginning or novice musicians enrolled in alternative music courses.

Do the motivational factors cited by students differ significantly by sex?

In short, the influential motivational factors cited by students did differ by sex, although the significant differences were not as abundant as when students enrolled in different music courses were compared. The majority of the eight motivational factors influenced male and female high school music students similarly. There were, however, two factors that differed significantly. Approaching musical success and avoiding musical failure motivation was significantly more influential for female music students. This finding contradicts the work of previous researchers' in the United States who found sex played a non-significant role in music academic achievement motivation (Sandene, 1997; Schmidt, 2005). However, Wright (2001) reported that female students in Wales significantly outperformed their male classmates in high school music classes. The fact that female music students were motivated more than male students to obtain their music teacher's approval and receive exemplary academic marks in music classes may have

been caused by the addition of alternative music course participants to this study of motivation in music. As discussed previously, alternative music course participants were influenced significantly less by approaching musical success and avoiding musical failure motivation. Given that male students were more likely to enroll in alternative music courses, the significant PC2 motivation difference by sex might have been expected.

Second, female music students were also influenced significantly more by musical mastery and affect motivation. This may be because female students more often receive musical training and performing experiences at young ages (Hargreaves et al., 1995). As a result, they often show a greater appreciation or preference for the classical music offerings traditionally provided in school settings. Although male and female participants in the present study did not differ significantly in musical background and home environment motivation, sex differences in music preference could ultimately motivate female students to set mastery goals and strive to be more accomplished performers, especially in traditional large ensemble settings. Certainly, the field of music education could benefit from continued research exploring sex differences and motivation in music.

Are students' motivations to participate in school music impacted by an interaction between music course enrollment and sex?

Students enrolled in different high school music elective courses are influenced to participate by different motivational factors. Also, female music students are influenced more significantly by certain motivational factors than male students. Despite the numerous significant motivation differences observed, no significant interaction was found between music course enrollment and sex. In other words, based on the findings

from this research study, I was unable to conclude that male or female students in specific high school music courses were influenced significantly more or less by any particular motivational factors.

Are male or female students more likely to participate in alternative music classes?

The sample in this study included 687 (40.1%) male and 1,000 (58.3%) female participants. The representation of male and female students within this sample is consistent with previous studies, which revealed that the majority of high school music students tend to be female (Elpus & Abril, 2011; Stewart, 1991). In all, 200 (11.7%) participants were enrolled in an alternative music course. This percentage included students enrolled solely in alternative music courses and students enrolled in a large performance ensemble and alternative music course concurrently. Although more female students enrolled in music classes overall, a greater proportion of male students enrolled in alternative music courses. This finding suggests that male students are more likely to participate in alternative music classes than female students. Furthermore, alternative music courses may play a valuable role in reducing the sex enrollment gap in music education by motivating more males to pursue music learning opportunities in schools.

Suggestions for Further Research

The intent of this study was to better understand the motivational factors that contribute to high school students' choices to enroll in curricular music courses and to better understand how these factors influence disparate groups of student musicians. This research study revealed that the motivational factors influencing students' choices to enroll in music often differ depending on the specific music courses students choose to

take. Given that motivation in music often originates from past experiences with learning and performing music, additional research is needed to determine how alternative music course participants' motivation may change after continued participation and instruction. Many of the large instrumental group participants have the option to participate in music throughout high school. However, the schools sampled in the present study had limited sequential course options for students interested in alternative music instruction. Once students took an electronic music course or a beginning guitar course, they were often left with few (or no) options to continue learning music in schools once they completed a semester or a year of instruction. Researchers should seek out schools that provide an extended sequence of alternative music learning options for students and explore the musical motivation of students who have taken multiple years of alternative music courses. With continued experience, alternative music course participants' motivation may more closely align with large ensemble participants.

Second, although the original intent of this study was to include a truly stratified sample of urban, suburban, and rural high school students, I was unable to gain access to schools within Minnesota's two largest urban centers. According to Doyle (2014), the majority of large ensemble participants tend to be "high-academically achieving, Caucasian, native-English-speaking students…[and] a large majority of urban students tend to be people of color, from low SES backgrounds, and/or speakers of English as a second language" (p. 47). Ultimately, this often results in an underrepresentation of urban students in high school music programs. Given that the present study supports previous research (Abramo, 2010; Cohen & Roudabush, 2010; Tobias, 2010) by

demonstrating that course content can be a major influence of students enrolled in alternative music courses, researchers should continue to explore how influential these courses are in motivating students from urban schools to enroll in music.

One of the strongest factors influencing high school student participation in school music was approaching musical success and avoiding musical failure motivation. As defined within this study, approaching musical success and avoiding musical failure meant that some students were motivated to obtain high grades in music and also to obtain their music teacher's approval. However, grading practices in high school music courses vary widely from teacher to teacher and from classroom to classroom. Many music teachers include attendance, participation, attitude, and behavior in students' grades (Lehman, 1998). Certainly, many large ensemble teachers who ask students to contribute musically to a group and perform publicly on a regular basis consider these criteria very important components of students' grades. Attendance and participation may play less significant roles in alternative music course grading. Researchers should consider investigating how different assessment and grading practices impact students' motivation in music.

Peer Musical Engagement and Social Interaction motivation was found to be significantly less influential for students enrolled in alternative music courses. This was not necessarily surprising given that the majority of alternative music course participants in this study was asked to engage primarily in individual music making experiences. Given that young popular musicians often place great importance on social interaction in music making (Newsom, 1998), researchers should investigate whether peer music

engagement and social interaction motivation plays an more influential role for students enrolled in alternative music courses designed around group music-making experiences.

Finally, the alternative music courses sampled in the present study were primarily focused on educating students through popular music instruments (e.g., guitar) and/or popular music styles (e.g., popular music singing, electronic music). In Mantie's (2013) examination of popular music research, there appeared to be a prevailing belief among members of the music education profession that including popular music in the high school curriculum would pose a threat to classical music courses and large performance ensembles. Although my research did not focus on teachers' perceptions of popular music in high schools, casual conversations with teachers at participating schools revealed both positive feelings about alternative music courses and also concerns about the preservation of large ensembles. In several schools, music teachers believed that alternative music courses were increasing access to music instruction for a different population of the student body, further supporting previous research on alternative music courses (Abramo, 2010; Cohen & Roudabush, 2010; Dammers, 2012). Other teachers worried that continued expansion of the music curriculum to include more alternative music course offerings may negatively impact enrollment in their large ensembles. Researchers should continue to investigate how widespread these concerns are among high school music teachers and to determine whether such beliefs negatively impact curricular expansion in music. In addition, researchers should attempt to determine whether or not such commonly held concerns are founded in fact.

Conclusions and Implications for the Music Education Profession

This study took place at a time when music educators in the United States were working, perhaps harder than ever before, to realize NAfME's utopian vision of providing all students access to a meaningful, quality music education (National Association for Music Education, 2011). For some music educators, increasing student enrollment in high school music may be viewed as imperative because they have witnessed or perceived student music enrollment declining at an unprecedented rate (Kratus, 2007; Williams, 2011). However, researchers have demonstrated that high school music enrollment has remained relatively stable nationally over the past several decades (Elpus, 2014; Stewart, 1991), and any reductions in student enrollment are likely regional or localized occurrences. Other music educators are simply not content with maintaining the music participation status quo and continue to work to reduce the nationwide 70% music non-participation rate in high schools.

In the introductory chapter of this dissertation, I described how an increasing number of music educators have begun enacting curricular reform by adding courses that deviate from the traditional large ensemble model of music instruction. By including alternative music courses and musical genres (e.g., popular music) that students consider more relevant, music educators are making concerted efforts to "encourage more…music study" (Hope, 2004, p. 3) in high schools. However, according to Hope (2004), liking and listening to certain musical styles take less effort than engaging in the rigorous academic study of music, regardless of the course content. Therefore, one must wonder whether alternative music courses truly attract new students to the academic study of music.

Mantie (2013) wrote, "The use of popular music in the classroom is not a panacea for the supposed ills of school music" (p. 348). Hope (2004) added that it is unreasonable "to suggest that if everyone would just do some particular thing or move in some particular direction nationwide, students would flock instantly to opportunities for rigorous music study, especially in public schools" (p. 3). The present research study supports both of these claims. The sample included six Minnesota high schools of varying sizes and socioeconomic compositions that offered alternative music courses in addition to traditional large ensemble offerings, and 29.3% of students in these schools were enrolled in music at the time of data collection. In other words, even with the addition of alternative music courses to the school curriculum, music participation was consistent with previous research that utilized nationally representative enrollment data. It would appear, at least based on the population represented in this study's sample, that alternative music courses may not be succeeding at increasing enrollment in school music programs. However, alternative music courses may be helping to sustain high school music participation rates at their current level of enrollment. Unfortunately, because the present study did not examine transcript data or include all students who had taken a music course during their time in high school, I was unable to make any definitive conclusions regarding enrollment percentages.

However, if adding alternative music courses to the curriculum is intended to "increase access to music for public schools students" (Miksza, 2013, p. 45), or, in other words, make music education more accessible to a larger or different population of high school students, then curricular reform efforts are proving successful. High school students' choices to enroll in school music courses are influenced by various motivational

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factors. The strongest influences for students enrolled in band, choir, and orchestra were not found to be identical to students enrolled in alternative music courses. After all, there are different types of music participants seeking different outcomes from their engagement with music (Gates, 1991). A quote I referenced in the introductory chapter of this study perhaps most simply summarizes the findings from the present investigation. Higgins (2012) wrote, "We don't put general, all-purpose fuel in a car. We put some particular type of fuel in a particular kind of car" (p. 21). Not all high school students are created alike, and a limited menu of large performance ensemble courses will never meet all of their disparate musical needs. Alternative music courses attract students more strongly influenced by different music motivational factors than traditional large ensemble participants.

I would like to conclude by encouraging more members of the music education profession to begin enacting curricular reform and expansion efforts. Miksza (2013) wrote, "No one will benefit from throwing the baby out with the bathwater when it comes to curricular reform" (p. 49). I could not agree more with this statement. Large performance ensembles have been and continue to be places where students engage in powerful music learning and music making experiences. Personally, I would not be here today writing this dissertation and preparing for a career as a music teacher educator had I not engaged in years of meaningful music learning through large ensembles. However, receiving a music education should not be a privilege reserved for the fortunate minority of students motivated to participate in the large performance ensembles traditionally offered in schools. Music education should be an inclusive practice, and this will likely only occur if music educators continue expanding the curriculum to include a diverse

array of music learning opportunities. As long as music education remains an elective

choice in high schools, we may never realize our goal of a quality music education for all

students. However, if members of our profession remain resistant to curricular reform

and expansion, we will most certainly never reach this goal.

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APPENDIX A: IRB Approval

UNIVERSITY OF MINNESOTA

Twin Cities Campus	*Human Research Protection Program*	*D528 Mayo Memorial Building*
	Office of the Vice President for Research	*420 Delaware Street S.E.*
		MMC 820
		Minneapolis, MN 55455

Office: 612-626-5654
Fax: 612-626-6061
E-mail: irb@umn.edu or ibc@umn.edu
Website: http://research.umn.edu/subjects/

December 8, 2014

David M. Rolandson
School of Music, 7811A
Ferguson Hall, Room 100
2106 4th Street South
Minneapolis, MN 55455

RE: "Alternative Music Courses and Student Motivation"
        IRB Code Number: **1410P54864**

Dear David Rolandson:

The Institutional Review Board (IRB) received your response to its stipulations. Since this information satisfies the federal criteria for approval at 45CFR46.111 and the requirements set by the IRB, **approval is granted with the understanding that once permission is granted by the school districts documentation of the permissions will be forwarded to the IRB.** Final approval for the project is noted in our files. Upon receipt of this letter, you may begin your research.

IRB approval of this study includes the following documents:

- Consent Form, received December 1, 2014
- Assent Form, received October 21, 2014
- Invitation to Participate in a Research Study, received October 23, 2014
- Musical Motivation Questionnaire, received October 21, 2014

The IRB would like to stress that subjects who go through the consent process are considered enrolled participants and are counted toward the total number of subjects, even if they have no further participation in the study. Please keep this in mind when calculating the number of subjects you request. This study is currently approved for 1500 subjects. If you desire an increase in the number of approved subjects, you will need to make a formal request to the IRB.

For your records and for grant certification purposes, the approval date for the referenced project is November 13, 2014 and the Assurance of Compliance number is FWA00000312 (Fairview Health Systems Research FWA00000325, Gillette Children's Specialty Healthcare FWA00004003). Research projects are subject to continuing review and renewal; approval will expire one year from that date. You will receive a report form two months before the expiration

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date. If you would like us to send certification of approval to a funding agency, please tell us the name and address of your contact person at the agency.

As Principal Investigator of this project, you are required by federal regulations to inform the IRB of any proposed changes in your research that will affect human subjects. Changes should not be initiated until written IRB approval is received. Unanticipated problems or serious unexpected adverse events should be reported to the IRB as they occur.

The IRB wishes you success with this research. If you have questions, please call the IRB office at 612-626-5654.

Sincerely,

Clinton Dietrich

Digitally signed by Clinton Dietrich
DN: c=US, st=Minnesota, l=Minneapolis, ou=Human
Research Protection Program, email=dietr006@umn.edu,
o=University of Minnesota, cn=Clinton Dietrich
Date: 2014.12.11 11:08:07 -06'00'

Clinton Dietrich, MA
Research Compliance Supervisor
CD/mw

CC: Keitha Hamann

APPENDIX B: IRB Change in Protocol Approval

UNIVERSITY OF MINNESOTA

Change In Protocol Request

Instructions:

Use this form when submitting change requests to approved IRB protocols. This form is for use when the changes are initiated by the PI. Do not use this form to respond when changes are requested by the IRB. Please do not use this form when responding to changes requested in a stipulation or deferral letter.

Submit this form to the Human Research Protection Program:

U.S. Mail Address: or
Human Research Protection Program
MMC 820
420 Delaware St. SE
Minneapolis, MN 55455-0392

Electronic Submission:
Submit to: irb@umn.edu
PI must submit request using University of Minnesota e-mail Account.

The UMN IRB reviewed and APPROVED this submission including all attachments listed on this form by expedited review

Clinton Dietrich

Digitally signed by Clinton Dietrich
DN: c=US, st=Minnesota, l=Minneapolis, ou=Human Research Protection Program, email=dietr006@umn.edu, o=University of Minnesota, cn=Clinton Dietrich
Date: 2015.01.12 12:11:32 –06'00'

IRB Protocol Information

IRB Study Number:	1410P54864
Principal Investigator:	David Rolandson
Primary Study Title:	Alternative Music Courses and Student Motivation
Date of this Submission	01-06-2015
Study Includes	☐ Drug(s) / Biologic(s) ☐ Device(s)

Indicate the type of change(s)	Additional information/requirements
☒ Change(s) to Study Procedures/Protocol Amendment Protocol Version , Dated	**Does the change affect study design, change the study endpoint(s) or change the statistical method?** ☒ **No** ☐ Yes **Is this protocol under** Masonic Cancer Center's Cancer Protocol Review Committee **(CPRC) review?** ☒ No ☐ Yes, CPRC # If "Yes" is checked for *both* questions above, this submission (Change in Protocol form) and any supporting documentation) must be reviewed by CPRC (CCPRC@umn.edu) prior to review by the IRB. CPRC will forward this submission to the IRB after CPRC approval. Submission to CPRC must meet the IRB signature requirement (signed by the PI or sent from the PI's x.500 UMN email account).
☐ Notice of Closure to Accrual	
☐ Recruitment changes/Advertisements	Attach a copy of the revised material (flyer, script, etc.) with the submission
☐ Revised Investigator Brochure	Version , Dated
☐ Updated consent form	Include both an updated form with changes highlighted and a "clean" version
☒ Other	Briefly Describe: Research Location Changes and Increased Sample Size

amendment." Rather, summarize the nature of the significant revisions.

> Two of the research locations (schools) approved on my initial IRB are no longer viable research locations. Two other schools (see attached list) were approached and have agreed to be in this study. With this change, I am also requesting approval for increased sample size. I have been approved for 1500 participants on my initial IRB form. I am requesting approval for 2500 participants.

2. **Describe the rationale for the change(s):**

> My research design planned for 7 schools (1 pilot and 6 research locations). Two of these locations are no longer viable for the purposes of the my study, so I approached and was granted access to two replacement schools. Additionally, my original estimate of 1500 participants was low. No students enrolled in music performance classes will be exluded from my sample. Therefore, I am requesting a sample size increase to 2500 participants.

3. **How will these changes affect the overall risk to subjects in this study?**

> There is no increased risk to subjects in this study.

4. **Do the changes to the study prompt changes to the consent form(s)?**

☒ **No.**
☐ **Yes. If yes:**
- **Attach a copy of the revised consent form(s) with changes tracked or highlighted as well as a clean copy.**

    4.1 Will currently enrolled subjects will be notified of the changes?
    ☒ **No**
    ☐ **Yes, explain below how they will be notified** (i.e. subjects will be re-consented with the updated form once approved, subjects will be provided with an information sheet, subjects will be told of changes at next study visit, etc.).

5. **List and attach all documents included with this request, including version dates:**

> 1. Revised List of Schools
> 2. Brooklyn Center Approval
> 3. Foley Approval
> 4. Glencoe Approval
> 5. Hopkins Approval
> 6. Wayzata Approval
> 7. Worhtington Approval
> 8. Tracy Approval

_____   _____

Principal Investigator's Signature   **Date**

Cancer Protocol Review Committee (CPRC) Use Only:

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APPENDIX C: Pilot Study MMQ

Musical Motivation Questionnaire

Participant Information

Please identify (circle) your sex: Male   Female

Please circle your age: 14   15   16   17   18   19

Please circle ALL music classes you are currently registered for in school:

Band

Orchestra

Jazz Ensemble (Jazz Band)

Choir (any vocal ensemble class)

Guitar Class (Guitar Ensemble)

Electronic Music

Mariachi Ensemble

Music Technology

Music Recording and/or Production

Song writing and/or Composition

Rock Ensemble

Sound Effex

Contemporary Music Project

History of Rock n' Roll

Other (Please write class name) _____

Read each of the following statements. After reading each statement, darken the circle that most accurately represents HOW STRONGLY YOU AGREE OR DISAGREE with each statement. There are no right or wrong answers, and nobody will know how you answered. Your responses will remain completely anonymous. Please respond to each statement as HONESTLY as possible.

1. I feel most successful in music when I do better than other students.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

2. I do my assigned work in music because the music we learn is really interesting.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

3. I like to work on my own in music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

4. I feel most successful in music when I am the best.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

5. I learn the most in music when I work with other students.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

6. I do my work in music class because I want to get good grades from my teacher.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

7. Creating music IS NOT FUN.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

8. When I am an adult, I hope to have a career in music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

9. I do my work in music class because I want my teacher to say nice things about me.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

10. I do my work in music class because I DO NOT want my teacher to think that I am unintelligent.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

11. I do my work in music class because I DO NOT want my teacher to give me bad grades.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

12. I have never been very good at music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

13. When I am an adult, people will want to hear me make music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

14. I work harder when I try to do better than other students in music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

15. I feel most successful in music when I know more than other students.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

16. I do my work in music class because I want my teacher to be pleased with me.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

17. I do my work in music class because I DO NOT want my teacher to say bad things about me.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

18. I do my best work in music when I work on my own.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

19. I work best in music by myself.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

20. I feel most successful when my friends and I help each other figure musical things out.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

21. I enjoy being with my friends in music class.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

22. Most people in my class are better musicians than I am.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

23. I do my work in music class because I DO NOT want to get into trouble with my teacher.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

24. I learn the most when I try to do better than other students in music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

25. I believe my classmates think I am not very good at music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

26. I feel most successful in music when I reach a goal or target.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

27. I like to work with other students in music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

28. I think I am one of the best musicians in my class.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

29. I like trying to do better than other students in music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

30. As an adult, I WILL NOT feel comfortable performing music in front of others.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

31. I AM NOT afraid to perform music when I think other people can hear me.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

32. I DO NOT LIKE the other students in music class.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

33. I do my assigned work in music because I like learning new things about music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

34. I feel most successful in music when I work to the best of my ability.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

35. I have never been very good at music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

36. I feel most successful in music when I do something others cannot do.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

37. I do my work in music class because I want my teacher to think that I am smart.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

38. I think I am just as good or better than most kids in some form of music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

39. I love listening to music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

40. I DO NOT like working on or mastering difficult music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

41. My classmates think I do well in music class.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

42. I am not very good at writing or reading music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

43. Musical ability runs in my family.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

44. In the future, people will want to hear me perform music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

45. I am a good musician.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

46. I do my best work in music when I work with other students.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

47. I feel most successful in music when I reach my own goals.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

48. In the future, I will be a better musician than other people.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

49. I do well when I try to be the best musician in my class.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

50. I feel most successful in music when I really improve.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

51. My parents are very musical.

O   O   O   O   O   O

Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

52. Making music is enjoyable.

O   O   O   O   O   O

Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

53. I learn the most in music when I work on my own.

O   O   O   O   O   O

Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

54. In the future, I will be a great musician.

O   O   O   O   O   O

Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

55. I work at my own pace and DO NOT try to do better than other students in music.

O   O   O   O   O   O

Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

56. I do my assigned work in music because I enjoy figuring things out about music.

O   O   O   O   O   O

Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

57. It IS NOT helpful to put together everyone's ideas when working on a piece of music.

O   O   O   O   O   O

Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

58. I am able to feel the emotion in music.

O   O   O   O   O   O

Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

59. As an adult, I will make a living as a musician.

O   O   O   O   O   O

Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

60. I feel most successful in music when I do something I could not do before.

O   O   O   O   O   O

Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

APPENDIX D: Potential Research Location Contact Script

Dear Music Teachers and Administrators:

My name is David Rolandson, and I am a Ph.D. Candidate in the School of Music at the University of Minnesota. I am writing to you to ask if [Name of School] would be willing to participate in my Doctoral Dissertation Research Study. The reason I am specifically contacting you, is because I am looking for innovative high schools that offer BOTH large ensemble (e.g., band, choir, orchestra) and alternative music classes (e.g., guitar, piano, songwriting, electronic music, rock band, etc.).

In recent years, courses in popular music, song writing, world music, and music technology (among others) have begun to emerge in a limited number of high schools in an attempt to increase access to and participation in school music programs. As high schools and music educators continue to invest valuable time, energy, and resources on curricular reform, it becomes important to examine if and how alternative approaches to music education have been successful in increasing access to music instruction.

The purpose of this study is to determine if students that elect alternative music classes are motivated to study music in schools for different reasons than traditional large ensemble (e.g., band, choir, orchestra) participants.

This study would involve allowing me to administer an anonymous and completely voluntary 15-20 minute motivation in music questionnaire to ALL music students at [Insert School]. Because this involves ALL music students, ALL music teachers in the building would have to be willing to provide me access to their classes. I would plan to visit on a day that would be minimally disruptive to your curricular teaching and/or concert preparation. I would also go through any and all necessary steps needed to acquire permission from building/district administration and parents. There would be NO personal, private, or identifiable information or data gathered from students.

I am sensitive to the many demands placed upon you as teachers and administrators. I hope you will consider allowing the students of [Insert School] to participate in this study so we can begin to better understand what motivates our students to elect music courses in our high schools.

Thank you for considering this request, and if you have any question about this study please contact me at 612.554.0904 or by email at rola0021@umn.edu. I look forward to your response.

Sincerely,
David Rolandson
Ph.D. Candidate
University of Minnesota

CONSENT FORM
Alternative Music Courses and Student Motivation

Dear Parents and Guardians:

Your child has been invited to participate in a research study examining what motivates high school (grades 9-12) students to enroll in school music classes. Your child was chosen for this study because he/she attends a high school in Minnesota that offers both large ensemble (e.g., band, choir, orchestra) and alternative music classes (e.g., guitar, piano, songwriting, electronic music, etc.). I ask that you read this form carefully and ask any questions you may have before your child participates in the study.

This study is being conducted by: David M. Rolandson, Ph.D. Candidate in Music Education at the University of Minnesota – Twin Cities (rola0021@umn.edu). This project is being supervised by Dr. Keitha Hamann, Associate Professor of Music Education at the University of Minnesota – Twin Cities (haman011@umn.edu).

Background Information
The purpose of this study is to determine if students in alternative music classes are motivated to study music in schools for different reasons than students in traditional large ensembles (e.g., band, choir, orchestra). The primary research questions for this study are:

Research Question One: *What motivates high school students to participate in music classes?*

Research Question Two: *How does motivation differ depending on the kind of music experience the student chooses?*

Research Question Three: *Are male or female students more likely to participate in alternative music classes?*

Research Question Four: *Is motivation in music different for males and females?*

It has been well documented that music is important to teenagers, whether they are performing, creating, or simply listening to music. What seems puzzling is that few high school students elect to study music in schools. Most students today are not interested in participating in the musical experiences being offered in schools. For students that love music and wish to take music courses in high school, traditional large ensembles (e.g., band, choir, orchestra, jazz ensemble) are commonly the only music courses offered.

In recent years, courses in popular music, song writing, guitar, and music technology (among others) have started being offered in high schools. By offering these classes,

schools hope more students will get involved in school music programs. As high schools and music educators continue investing valuable time, energy, and resources on offering new types of music courses, it becomes important to examine if and how these courses are successful in getting new students involved in school music programs. A necessary step in this process is to understand what truly motivates high school students to participate in music courses. This study seeks to determine if students that elect alternative music classes are motivated to study music in schools for different reasons than students in traditional large ensembles.

Procedures
If your child agrees to be in this study, he/she will be asked to do the following things:
- During music class time, your child will complete a questionnaire designed to measure musical motivation. The questionnaire will take no longer than 15-20 minutes. Your child's responses will be completely anonymous. Your child **will not** be asked to provide his/her name or any other personal information.

Risks and Benefits of Being in the Study
There is very minimal risk associated with this study. The questionnaire that your child is being asked to complete asks him/her to identify his/her gender, age, and the music class(es) in which he/she is enrolled. This information is being collected to help the researcher compare data between groups of students. Based on this information, it might be possible for someone to guess who completed specific questionnaires. However, all questionnaires are taken anonymously (your child will not be asked to provide his/her name), and no one will see or have access to the completed questionnaires except for the researcher (David M. Rolandson). Your child will choose to participate or not participate in this study.

This study will provide no direct benefit to your child; however, the results will help music teachers better understand why students are motivated to take music in schools. These types of studies often help guide music teachers, administrators, and policy makers when making decisions about the music courses offered in schools.

Compensation
Your child will not be compensated or receive payment for participating in this study.

Confidentiality
The records of this study will be kept private. In any sort of report the researcher might publish, he will not include any information that will make it possible to identify your child specifically. Research records will be stored securely, and only the researcher will have access to the records. The data will be stored on a password-protected computer for protection. All printed records will be stored in a locked cabinet in the researcher's locked office. At the conclusion of the study, all questionnaires will be destroyed.

Voluntary Nature of the Study
Participation in this study is voluntary. Your child's decision on whether or not to participate will not affect his/her current or future relationship with the University of Minnesota, his/her music teacher, or his/her school. If your child decides to participate, he/she will be free to not answer any question or withdraw from the study at any time without affecting those relationships.

Contacts and Questions
The researcher conducting this study is David M. Rolandson. You may ask any questions you have at any time. If you have questions, **you are encouraged** to contact him at the School of Music, University of Minnesota, 612.554.0904, or by email at rola0021@umn.edu. You may also contact the advisor for this project, Dr. Keitha Hamann, Ph.D. at the School of Music, University of Minnesota, 612.624.9819, or by email haman011@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

You will be given a copy of this information to keep for your records.

Statement of Consent

**If you are comfortable with your child participating in this study, no further action is needed. However, if you <u>DO NOT</u> want your child to participate in this study for any reason, please complete and return the form below.

I have read the information provided. I have asked questions and have received answers. I **<u>DO NOT</u>** consent to my child participating in this study.

Name of student: _____

Signature of parent or guardian: _____

Date: _____

Music Student Motivation Study

I am asking if you are willing to complete a short survey/questionnaire about music and motivation. Since you are a music student at a high school that offers several different choices in music classes, I am asking if you want to be in a study. For many years, the only music classes offered in high schools were large ensemble classes like band, choir, and orchestra. Recently, schools like your high school began offering different types of music courses to provide music classes for students with different musical interests. I hope that my study will show that different types of music classes attract students with different musical interests, but I will not know until I measure the things that motivate students to enroll in music classes.

If you agree to be in this study, I will ask you to complete a short questionnaire about music and motivation. It will only take about 15-20 minutes to complete, and will be done during your music class.

If you agree to complete the questionnaire and change your mind after you start, you can always stop before completing it. Being in this study is totally up to you, and no one will be mad at you if you do not want to participate in it.

You can ask any questions that you have about this study. If you have a question later, you can raise your hand and ask me at that time or after you are done with the questionnaire.

Signing here means that you have read this paper or had it read to you and that you are willing to be in this study. If you do not want to be in this study, do not sign this form. Remember, being in this study is up to you, and no one will be mad at you if you do not sign this or even if you change your mind later.

Signature of participant_____

Date_____

Signature of person explaining study_____

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APPENDIX G: Revised MMQ

Musical Motivation Questionnaire

Participant Information

Please identify (circle) your sex:　　　　Male　　　　Female

Please circle your age:　　14　　15　　16　　17　　18　　19

Please circle ALL music classes you are currently registered for in school:

Band

Choir (Vocal Ensemble Class)

Contemporary Music Project

Electronic Music

Guitar Class (Guitar Ensemble)

History of Rock n' Roll

Jazz Ensemble (Jazz Band)

Mariachi Ensemble

Music Recording and/or Production

Music Technology

Orchestra (String Ensemble Class)

Piano Class (Keyboard Class)

Rock Ensemble

Song writing and/or Composition

Sound Effex

Other (Please write class name) _____

Questionnaire Directions

Read each of the following statements. After reading each statement, darken the circle that most accurately represents HOW STRONGLY YOU AGREE OR DISAGREE with each statement. There are no right or wrong answers, and nobody will know how you answered. Your responses will remain completely anonymous. Please respond to each statement as HONESTLY as possible.

1. I feel most successful in music when I do better than other students.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

2. I do my assigned work in music because the music we learn is really interesting.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

3. I like to work on my own in music.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

4. I feel most successful in music when I am the best.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

5. I learn the most in music when I work with other students.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

6. I do my work in music class because I want to get good grades from my teacher.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

7. Creating music IS NOT FUN.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

8. When I am an adult, I hope to have a career in music.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

9. I do my work in music class because I want my teacher to say nice things about me.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

10. I do my work in music class because I DO NOT want my teacher to think that I am unintelligent.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

11. I do my work in music class because I DO NOT want my teacher to give me bad grades.

    O   O   O   O   O   O

Strongly Disagree Disagree   Slightly Disagree Slightly Agree   Agree   Strongly Agree

12. I have never been very good at music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

13. I feel like my music teacher(s) really understands me.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

14. I work harder when I try to do better than other students in music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

15. I feel most successful in music when I know more than other students.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

16. I do my work in music class because I want my teacher to be pleased with me.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

17. I do my work in music class because I DO NOT want my teacher to say bad things about me.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

18. I do my best work in music when I work on my own.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

19. I work best in music by myself.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

20. I feel most successful when my friends and I help each other figure musical things out.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

21. I enjoy being with my friends in music class.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

22. I started learning music at a very young age.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

23. I do my work in music class because I DO NOT want to get into trouble with my teacher.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

24. I learn the most when I try to do better than other students in music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

25. I believe my classmates think I am not very good at music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

26. I feel most successful in music when I reach a goal or target.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

27. I like to work with other students in music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

28. I think I am one of the best musicians in my class.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

29. I like trying to do better than other students in music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

30. As an adult, I WILL NOT feel comfortable performing music in front of others.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

31. I AM NOT afraid to perform music when I think other people can hear me.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

32. I DO NOT LIKE the other students in music class.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

33. I do my assigned work in music because I like learning new things about music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

34. I feel most successful in music when I work to the best of my ability.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

35. I DO NOT have a natural talent for music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

36. I feel most successful in music when I do something others cannot do.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

37. I do my work in music class because I want my teacher to think that I am smart.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

38. I think I am just as good or better than most kids in some form of music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

39. I love listening to music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

40. I DO NOT like working on or mastering difficult music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

41. My classmates think I do well in music class.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

42. I am not very good at writing or reading music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

43. Musical ability runs in my family.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

44. In the future, people will want to hear me perform music.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

45. I am a good musician.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

46. I do my best work in music when I work with other students.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

47. I feel most successful in music when I reach my own goals.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

48. In the future, I will be a better musician than other people.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

49. I do well when I try to be the best musician in my class.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

50. I feel most successful in music when I really improve.

O	O	O	O	O	O
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

51. My parents are very musical.
O   O   O   O   O   O
Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

52. Making music is enjoyable.
O   O   O   O   O   O
Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

53. I learn the most in music when I work on my own.
O   O   O   O   O   O
Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

54. In the future, I will be a great musician.
O   O   O   O   O   O
Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

55. I work at my own pace and DO NOT try to do better than other students in music.
O   O   O   O   O   O
Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

56. I do my assigned work in music because I enjoy figuring things out about music.
O   O   O   O   O   O
Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

57. It IS NOT helpful to put together everyone's ideas when working on a piece of music.
O   O   O   O   O   O
Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

58. I am able to feel the emotion in music.
O   O   O   O   O   O
Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

59. I really like my music teacher(s).
O   O   O   O   O   O
Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree

60. I feel most successful in music when I do something I could not do before.
O   O   O   O   O   O
Strongly Disagree   Disagree   Slightly Disagree   Slightly Agree   Agree   Strongly Agree