STUDENT PERCEPTIONS OF INFORMAL LEARNING EXPERIENCES IN
INSTRUMENTAL MUSIC ENSEMBLES: A PHENOMENOLOGY

by

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A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of the requirements for the degree of Master of Music

Spring 2011

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To my parents John and Anne,

and my brother Michael
ACKNOWLEDGEMENTS

The completion of this thesis would not have been possible without the contributions of a dedicated and enthusiastic committee. I would like to express my gratitude to:

Frank Abrahams, Ed. D. chairperson of my thesis committee, for his comprehensive guidance through the research process. The considerable time he devoted to attend to every detail of this study and his facility in effectively communicating his extensive knowledge of qualitative research enabled me to approach this thesis from new perspectives and elevated my potential as an emerging music educator and researcher.

Suzanne Burton, Ph. D. for her continuous advice, guidance, and academic support throughout the past six years. Without her influence and direction, I would not have pursued music education research.

Philip Gentry, Ph. D. for the time, effort and knowledge that he offered in improving this work.

I would also like to thank the University of Delaware Department of Music, and Chair Paul Head, D.M.A. for encouraging my research and supporting me during my graduate and undergraduate study.

Thank you to external auditor Sarah Aherne.

Finally, a very special thank you to the students and their teachers, whose participation and flexibility was fundamental to the successful completion of this project.
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ABSTRACT

STUDENT PERCEPTIONS OF INFORMAL LEARNING EXPERIENCES IN INSTRUMENTAL MUSIC ENSEMBLES: A PHENOMENOLOGY

As music educators search for ways to engage their students in musical practice that is culturally and socially relevant, the use of informal music practices as a means of instruction is gaining popularity. The purpose of this research was to understand the perspectives of adolescent music students as they engaged in informal music learning experiences within the context of their school music ensembles. Specifically, the research examined to what extent participation in informal learning contexts impact student practice, musical achievement, the quality of students’ experiences in their school music ensemble, and students’ self-perceptions. Data included participant journal entries, video and audio taped rehearsals, semi-structured interviews with students and teachers, field notes, and pre- and post-project questionnaires.

The researcher found that students who were actively engaged within informal learning contexts developed new strategies for music learning, and students perceived that they gained greater confidence in their ability to learn independently, recognized benefits from collaborations with peers, were more thorough in their practice and became more productive in their school ensembles. The researcher recommends that teachers situate learning contexts in ways that encourage student ownership over aspects of their
learning, develop students’ communication skills, and enhance students’ awareness of the skills that they possess.
Chapter I

INTRODUCTION

Educators and researchers have long investigated methods and techniques that best promote student learning. Music educators increasingly turn to popular music as a vehicle for music learning and engagement (Abrahams, 2008; Burnard & Spruce, 2010) and debate the efficacy of learning that music in informal learning contexts. Lamont, Hargreaves, Marshall, and Tarrant (2002) reported that as students age, they are more likely to actively engage in informal music activities outside of school than formal music-making in school. As the cultural divide between the music that is traditionally taught in schools and the music that the general public listens to grows, music educators need to find authentic and meaningful ways of connecting musically with their students by bridging the gap between those musics. Allsup (2003) suggested that missing in students’ formal education are opportunities to create new music that is culturally meaningful and self-reflective. Allsup asserted that the disconnection between music studied at school and in students’ private lives reinforces an artificial dichotomy between the opposing cultures of students and teachers. Informal learning strategies in the classroom could create musical contexts that would bridge this cultural gap.
Statement of the Problem

For school music education to have an impact on the musical lives of students, teachers need to gain a better understanding of (a) the musical worlds of their students, and (b) how they can best situate learning contexts to make the most of students’ existing musical knowledge and abilities (Vygotsky, 1926/1997). Dewey (1944) and Freire (1970) declared the importance of giving students a voice, responsibility and ownership over their learning experiences. Informal music environments may provide a vehicle for a more natural transfer of skills from teacher to student, and from students to one another. A better understanding of how informal learning contexts affect student musical engagement could enhance educators’ abilities to teach effectively. More specifically, understanding how students’ perceptions change as they engage with informal experiences may inform educational practice within the context of school music instruction.

Purpose of the Study

The intent of this study was to examine how students perceived their participation in informal learning contexts impacted their practice, musical achievement, participation in school music contexts, and self-perceptions. The research focused on adolescents who were enrolled in formal school music ensembles. Through this phenomenological study, the researcher explored adolescent perspectives to understand whether informal music contexts provided students with experiences necessary for emerging musicianship.
**Research Questions**

The researcher hypothesized that a better understanding of how students perceive their participation within an informal learning context may inform the efficacy of including informal learning contexts within school music instruction. Therefore, the following research questions were addressed:

1. To what extent does participation in an informal learning context impact student practice?
2. To what extent does participation in an informal learning context impact student musical achievement?
3. To what extent does participation in an informal learning context impact student experience in their school ensemble?
4. To what extent does participation in an informal learning context impact student self-perception?

**Key Words and Definitions**

The following definitions are provided to clarify terminology pertaining to the design and conceptualization of this research study:

Informal music learning context – Direct instruction is rarely provided by a teacher. Students choose the music they will learn. The primary means of learning music involves learning by ear, and takes place alone as well as with friends. Learning music can also take place through visual transmission, such as watching videos online. Skills and knowledge tend to be assimilated in haphazard and idiosyncratic ways that begin with pieces of real-world music in their full form. There is an emphasis on creativity, and knowledge is constructed through imitation and discussion (Green, 2006, 2008a).
Formal music learning context – Students tend to follow planned progressions going from simple to complex, as determined by a teacher. Learning often involves specifically composed exercises and music that is taught under the direction of a master teacher. Reproduction, rather than creativity, is viewed as a means of assessment, and knowledge is often constructed through repetition and drill (Green, 2006, 2008a). In formal music learning contexts, teachers are the source of instruction, and students are consumers of information.

Social constructivism – Philosophical/theoretical lens that suggests that the basic generation of meaning is always social. Humans interact with their environments and make sense of their world based on their own historical and social perspectives (Creswell, 2009).

Phenomenology – a strategy of inquiry utilizing qualitative procedures to identify the essence of human experiences about a phenomenon as described by participants. This approach assumes that individuals experience phenomena in unique ways, and concentrates on the unique aspects of said experiences (Creswell, 2009; Plano Clark & Creswell, 2010).

Practice – In the context of this study, practice refers to the ways in which students rehearsed music materials within informal learning contexts.

Delimitations of the Study

The population of this study was delimited to music teachers and students in two public schools. The research was conducted during the 2010-2011 academic year. Data
were collected from October to January, and analyzed from January to March. Findings were presented in April.

**Role of the Researcher**

I served as an observer during the data collection phase of this research project. Students knew that I was a university graduate student who was interested in how they were going to make music arrangements when a teacher was not in control of their rehearsals. As an observer, I collected data in the form of video and audiotapes, field observations, questionnaires, journal entries, and interviews. I strived to record group interactions and behaviors as objectively as possible without interfering with student exchanges.

I have taken on this study as an instrumentalist who is the product of a formal public school music program. Having read the literature of Green (2002, 2008a), I brought a positive bias to the potential outcomes of student involvement in an informal learning context.

**Significance of the Study**

As teachers search for the best ways to engage students in musical experiences, it is important that student perspectives be considered (Abrahams, 2005; Dewey, 1944). While there is research on the applications of informal music learning, research from the perspective of the student is missing. Educators who are able to understand their students’ perceptions of involvement within informal learning experiences will be able to stimulate active student participation and create meaningful music learning opportunities. Research
on successful and innovative approaches to music education will assist teachers and
administrators in developing meaningful modes of instruction in schools.

Additionally, this study is significant in that there is a lack of research that
examines informal contexts within middle school instrumental ensembles. Green (2008a),
whose participants were middle-school aged children enrolled in compulsory general
music classes, has conducted the most prominent research in the field of informal music
learning. Unlike Green’s participants, the context of the current research study is 6th, 8th,
and 9th grade instrumental ensembles whose participants have chosen to be a part of
active, formal music-making.

Organization of the Study

This thesis contains five chapters. Chapter one includes an introduction and
rationale; the statement of the problem; the purpose of the study; the significance of the
study; the delimitations of the study; key words and definitions; and the role of the
researcher. The researcher reviewed related literature in chapter two. The methodology,
including research design and data collection techniques is described in chapter three. An
analysis of the data and results appears in chapter four. Chapter five contains conclusions,
implications for music education, and recommendations for future research.
Chapter II
REVIEW OF LITERATURE

Learning Contexts

The field of informal music practice within music education is relatively new, and thus a critical inquiry into the current research may provide new perspectives on the pedagogical value of informal music learning. In this review, I address studies relating to informal music instruction for students in elementary, middle, high school, and institutes of higher learning. Elements of (a) student motivation, (b) learner autonomy, (c) democracy within the classroom, and (d) social and cultural implications of including popular music in the school music curriculum are discussed.

Formal Learning Contexts

To fully comprehend research pertaining to informal learning contexts, the nature of informal education and the ways in which this instructional approach differs from formal education must be considered. Formal instruction implies the presence of learning situations that involve adult supervision and/or guidance from an expert with superior skills and knowledge (Allsup, 2003; Mak, 2004). Learning is intentional, and the learning process is teacher-directed (Mak, 2004). An emphasis is also likely to be placed on de-contextualized knowledge or pure reasoning (Allsup, 2003; Mak, 2004). Standards are well defined, and specific goals are established that lie outside of current levels of
performance – with the intent to reach these goals during periods of great concentration and feedback (Colardyn, 2002; Lehmann, Sloboda, & Woody, 2007). There is also the possibility of explicit feedback in formal practice (Lehmann et al., 2007).

In a formal instructional setting, teachers develop a predetermined series of instructional steps that enable them to control learning and efficiently identify problems (Rodriguez, 2009). Thus, formal contexts can be characterized by sequence and planning (Jaffurs, 2006). Learning is based on hierarchic curriculum – organized and structured content containing objectives, method, and assessment (Mak, 2004). Assessment is of product rather than process, relating to intentional learning and explicit knowledge (Mak, 2004).

In addition to formal and informal learning contexts, Mak (2004) made the distinction of having non-formal learning contexts. These learning situations refer to any organized educational activity that could take place outside of established formal education. These experiences are often situated in real-life contexts, emphasize practical skills and knowledge, and include learning and teaching that is intentional and incidental (Mak, 2004). Specifically, coaching is the foremost teaching tactic, although learning from each other is as important as learning from the teacher. Utility serves as the criterion for legitimizing knowledge, and since product and process are assessed, incidental and intentional learning is valued (Mak, 2004). Reflection serves to create meaning from participant experiences, making explicit what was acquired implicitly (Mak, 2004).

Heuser and Thompson (2010) acknowledged that the systematic, structured learning processes characteristic of formal settings can lead to valuable analytical and
descriptive tools that can empower learning. The development of music knowledge and skills can demand repetition, continuity, and practice that is aligned with well-structured content that gradually increases in complexity (Georgii-Hemming & Westvall, 2010). However, these elements of learning, situated within a formal music context, might result in over-analysis and loss of enjoyment during music making (Heuser & Thompson, 2010).

**Informal Learning Contexts**

Green (2006) proposed five main characteristics that differentiate informal and formal music learning practice:

1. Informal learners choose the music they will study themselves.
2. Informal music learning is based on an aural rather than theoretical approach.
3. In an informal learning context, students are self-taught, with learning occurring in groups.
4. In an informal learning context, skills and knowledge are assimilated in personal ways according to musical preference.
5. In an informal learning context, there is an emphasis on creativity while also integrating elements of listening, performing, improvising and composing.

Music that is selected by students for the purpose of music learning tends to be familiar and enjoyable to them. In contrast to the music that is most likely to be chosen by teachers in a formal music setting, informal music contexts often promote musical selections that students will be able to identify with (Green, 2006, 2008a). There is also likely to be less written and verbal instructions and formal notation within an informal learning context. Students are less reliant on a master instructor for guidance (Green, 2006, 2008a). Although learning is not teacher-directed, learning can still be intentional
as well as incidental. The context created is that of real life, without interference by an educational authority. Thus, learning activities relate to personal learning drives and motives, and are directed by personal needs (Mak, 2004). Knowledge and meaning are constructed through imitation, discussion, and interaction with peers in group settings (Green, 2006, 2008a; Mak, 2004). Heuser and Thompson (2010) also noted the emergence of the Internet as being a major source of instructional materials for informal music learners. In fact, they asserted that informal learning could be characterized by three distinct styles of learning: Individual, group, and Internet learning. These three styles of learning have an interconnectedness that, depending upon individual aptitude and ambition, can lead to maintenance of passion and motivation in music.

Another difference between informal and formal teaching practice is an emphasis on skill development and the expectation of reproduction as a means of assessment in formal learning contexts (Green, 2006, 2008a). Informal learning contexts lack formally described learning objectives, instead containing unplanned and planned learning activities that result from daily life situations (Mak, 2004).

**Role of the teacher.** The teacher’s role in an informal learning context is highly adaptive. Rodriguez (2009) described the teacher’s function as releasing control, and developing a flexible and dynamic relationship with the learners. While there is still a plan for instruction, this plan is negotiated between teacher and students. The teacher can be seen as a facilitator, a member of a community of learners that is cooperative and collaborative (Feichas, 2010). Teachers remain aware of the sequence students are taking to accomplish tasks, and reorganize or reframe these tasks to promote learning
(Rodriguez, 2009). The *Musical Futures* curriculum utilized in Green’s (2008a) research emphasized similar roles for the teacher in an informal learning context (D’Amore, 2009). The role of the teacher is described as being responsive to student actions and needs. After a task has been set for students, teachers stand back, observe students, and offer guidance and support based on what students have set out to achieve. Teacher help most often takes the form of modeling (D’Amore, 2009).

**Criticisms.** The research of Green (2002, 2006, 2008a) tends to be the most highly cited in current studies concerning informal music learning contexts. Accordingly, Green’s research on informal learning contexts has undergone much criticism and debate. Green’s research study focused in detail on seven classes [sic] of 13- to 14-year-old students from secondary schools in the London area, although data were drawn from a larger population of 1,500 students from 21 separate schools (Green, 2008a). Green enacted a curriculum called *Musical Futures*, which was based on an empirical observation of the real-world learning practices of popular musicians (Green, 2002), with these students.

The role of the teacher in an informal learning environment has been an issue of particular contest among music education researchers. Clements (2008) brought attention to the master-apprentice model that, while prevalent throughout most world cultures, is missing from Green’s approach to informal learning. According to Clements, it is natural that musicians of differing abilities gather, with inexperienced and experienced musicians learning side by side. Enculturation, a process by which individuals acquire skills simply by joining in with others’ music-making, is addressed within Green’s 2008 text, *Music,*
Informal Learning and the School. However, Green posited that western formal education has lost such educational approaches. According to Green (2008a), popular musicians’ practice of playing along with recordings that are always up to speed serves a similar function to enculturation – being able to play along without compromising the musical event. Nevertheless, Allsup (2008) has also questioned the role of the teacher, suggesting that it is currently unclear as to what makes for a good teacher within informal learning contexts.

Heuser and Thompson (2010) suggested that the absence of guidance, even in an informal learning context, can lead to a variety of performance problems, such as inefficient technique, plateaus in learning, frustration, and disillusion. Georgii-Hemming and Westvall (2010) also highlighted that informal and individualized strategies of instruction do not necessarily result in increased motivation, participation, and inclusion. Interestingly, in Sweden, where one of the objectives of the music curriculum’s informal pedagogical approach is to emphasize students’ personal experiences and choice within the classroom, studies have shown that not all students’ musical worlds are accurately represented in the classroom (Georgii-Hemming & Westvall, 2010).

The semantics revolving around definitions of informal learning are also a source of contention. Allsup (2008) warned that researchers must be careful in distinguishing between formal learning and formalism, and informal learning and informalism. Green (2010) echoed this concern, and acknowledged the necessity of distinguishing between concepts of informality and informal pedagogy. Green stated that “informality arising from a pedagogy that is vague, direction-less and devoid of any teacher-input is of course
not the same thing as informality arising from a pedagogy that is thoughtfully derived from, and carefully structured upon the real-world learning practices of musicians in the informal realm” (pp. 90-91). The ‘what shall we do today’ methodology that Allsup and Green warned against has been reported in Swedish informal school music classes through Swedish national evaluations (Georgii-Hemming & Westvall, 2010). Researchers in Sweden characterized informal music lessons as incorporating temporary solutions, improvised discussions, and teaching that was considered to be short-term, unplanned, and populist (Georgii-Hemming & Westvall, 2010).

Another basis of confusion regarding informal learning is that informal learning practice is often misinterpreted as being the same as teaching popular music. Allsup (2008) warned that assigning informal learning with a genre-specific artform could result in an unintentional narrowing of musical possibilities within the classroom. Allsup felt that the Musical Futures curriculum that centered on the practices of Anglo-American guitar-based music makers (Green, 2002) was culpable of such reduction. Indeed, Finney and Philpott (2010) have also expressed their apprehension concerning Musical Futures and the possibility that teachers will be introduced to informal pedagogy as a formula for working with students. They expressed concern regarding the potential commoditization of Musical Futures as a curriculum, whereby informal strategies might become formalized (Finney & Philpott, 2010). Clements (2008) described Green’s methods as becoming too prescriptive, expressing concern that traditional methods may just be replaced with a new method. Green (2008b) has acknowledged that, in order to draw
conclusions from her study regarding informal learning in English schools, teachers were requested to take a common approach.

When evaluating the implementation of popular-music-based pedagogy, Green did encounter instances warranting Finney and Philpott’s apprehensions. Green’s (2006) observations of music teachers in England confirmed that the inclusion of popular music in the classroom did not in-and-of-itself delineate an informal learning context. To the contrary, Green discovered that in developing curriculum for popular music, the processes by which popular music is transmitted in the real world were largely ignored by teachers. Thus, while the curriculum changed, teachers’ teaching strategies did not, and an attempt at creating popular music through formal contexts occurred. As a result of focusing on the product of popular music instead of the process of transmitting and creating it, the real-life process of instruction that occurs within popular music was altered (Green, 2006). By taking popular music out of its original context and modifying it to fit into a formal curriculum, the inherent value in the process of music learning was lost (Green, 2006).

Georgii-Hemming and Westvall (2010), of Orebro University, Sweden, have advocated for discretion when considering the inclusion of informal approaches to music education. With their unique perspective of the Swedish system of education, which has instituted an informal pedagogical approach for the past few decades, they offered the following warnings. Georgii-Hemming and Westvall reported that as a result of an enhanced priority being given to personal social development and individual musical interests, music education in Sweden has become relatively limited in terms of teaching
methods, repertoire, and content. In the Swedish system of music education, students are given the opportunity to make their own musical decisions, with music learning being mainly peer-directed, and singing and playing encompassing the content, method, and objectives present in the classroom. Evaluations have revealed that music education lacked direction and creative musical engagement (Georgii-Hemming & Westvall, 2010). Despite popular music being integrated into music class, and in spite of students’ professed enjoyment and appreciation of being able to play music in groups, music class was still perceived by students as old-fashioned and lacking in scope of genres. Furthermore, the teacher’s role in the classroom was unclear, sometimes lacking validity in practical music education situations (Georgii-Hemming & Westvall, 2010). Unfortunately, the decentralization of the school music curriculum also had ill effects. While informal learning environments that allow for methods and educational content to be chosen in accordance with unique situations can increase general satisfaction, an open and non-linear curriculum can also present problems concerning student mobility between schools and national assessment. Without well-structured, comparable education across districts, students who change schools may lack the relevant skills and knowledge needed to effectively participate in school music activities (Georgii-Hemming & Westvall, 2010).

Researchers (Abrahams, 2010; Green, 2008a) have shown that informal learning environments that enable groups of students to make autonomous decisions regarding music-making facilitate the emergence of student leaders. Georgii-Hemming and Westvall (2010) found that, within informal learning contexts, dominant students were
able to take control of content and design, and even tried out new instruments during music classes. However, they regrettably found that the quiet students remained quiet, and that students lacking instrumental experience held back from even trying to contribute. Georgii-Hemming and Westvall (2010) suggested that it might not always be a positive thing for students who already have a personal engagement with music to have their experiences incorporated into school music lessons. They recommended that music class should contain topics that interest all students, regardless of personal interest in music.

Georgii-Hemming and Westvall (2010) questioned whether the Swedish education system has become too individualized and informal. Currently, students are offered the opportunity to discover their own musical preferences without previously widening their knowledge or exposing them to different forms of music or musical engagement. Consequently, Georgii-Hemming and Westvall have asked whether there may be a more effective balance between informal and formal learning situations – teaching contexts that could include content familiar and unfamiliar, without becoming normative. These researchers suggested that, as informal learning in schools is part of formal education, formal learning strategies should supplement and support instruction.

**A Unified Approach**

An attempt to accurately define learning environments as being formal or informal can be difficult considering the numerous variables involved in any learning context. Where is the learning situated? Is an aural, oral, or written approach being utilized? Is progress and achievement being regulated, or is the activity left open? Are
students playing music or learning about how they should play music theoretically? The multiple perspectives with which one can view a learning environment may cast doubt on one’s ability to firmly define any given situation. Folkestad (2006) identified intentionality as being a key indicator in the distinction between formal and informal learning contexts. Whereas, in formal contexts, teacher and student are focused on learning *how to play*, informal learning practice places the emphasis on actually *playing and making music*. Folkestad further classified planned, sequenced activities arranged and carried out by a teacher figure as being a characteristic of formal music practice. However, this teacher figure could in reality be a student who had taken the initiative to organize and lead a learning activity.

Consequently, Folkestad (2006) was careful not to label the teaching or learning of any specific style of music as being either formal or informal in practice. While current music research in the field of informal learning contexts is focused almost entirely on the inclusion of popular music, Folkestad suggested that formal and informal learning are present interacting with each other in most conditions. Folkestad asserted that it is more important to gear instruction according to the music content of a musical style or setting rather than the genre. In other words, even though it may be unlikely in its most natural form, popular music can conceivably be taught using formal teaching practice in the classroom, just as aural approaches to teaching (previously defined by Green [2006] as characteristic to informal learning practice), do not guarantee the presence of informal music practice. Wright and Kanellopoulos (2010) also noted the importance of not
automatically categorizing aural and oral modes of learning as being informal based solely on their difference from the formality of traditional western models of instruction.

To avoid categorizing informal and formal practice according to musical genre, Folkestad (2006) proposed that informal and formal teaching practice be viewed as opposite ends of a continuum rather than dichotomous entities. In this fashion, education can serve as a meeting place for informal and formal learning contexts, enabling teachers to organize learning in a way that has commonalities with everyday learning that occurs outside of classroom walls. Thus, learning that occurs within school can present alternative ways of gaining knowledge in comparison to, and in agreement with, students’ prior experiences. Green (2002) was also careful in her distinction between formal music education and informal music learning. Green stated that informal and formal music learning was not mutually exclusive, and that they should be envisaged as “extremes existing at the two ends of a single pole” (pp. 5-6). Other researchers have since embraced this concept. Feichas (2010) suggested that while formal and informal approaches seemed to be opposed to one another, aspects of both could in fact be present in the same situation. Heuser and Thompson (2010) also chose to approach formal and informal learning as a process that, rather than being dichotomous, could be seen as two learning styles on a continuum that, when effectively understood, could maximize student learning efforts. Mornell (2009) described a convergence of the characteristics of informal and formal contexts based on concepts of informal and deliberate practice. Whether one learns in an informal or formal way, to achieve musical expertise, Mornell asserted that an individual must be motivated and identify with the music; obtain
constructive feedback from others; utilize variable styles of practice; memorize music implicitly as well as explicitly; and strive for authentic music-making and personal expression.

**Motivation**

Numerous researchers have reported that informal learning contexts result in increased motivation for students (Green, 2006, 2008a; Jaffurs, 2004; Lamont, Hargreaves, Marshall, & Tarrant, 2002; Seifried, 2006). The nature of informal learning contexts, characterized by student participation in music-making, facilitates student interest and enthusiasm. Lehmann et al. (2007) reported that students are most attentive during activities that require active participation, as opposed to teacher lectures, which inspire the least amount of attention. Informal music contexts are also distinguished by the choice that students are given in determining the music they will learn. Renwick and McPherson (2002) stated that when students are allowed to practice music they have selected and find personally interesting, an increased use of cognitive and metacognitive strategies typical of an expert’s practice can occur, leading to learning that is more effective. Renwick and McPherson’s research involved a case study of an adolescent female clarinet player. Through a comparison of videotaped practice sessions involving music that was assigned to the student versus being self-chosen, the researchers found that she practiced the music that she had chosen and enjoyed longer than the other repertoire. Moreover, greater interest lead to advanced practice strategies such as humming, silent fingering and analysis, adjustment of tempo, and repetition of larger
sections of the music. Mornell (2009) reported that a feeling of choice could enhance individuals’ confidence levels and facilitate creativity and complex problem solving.

In an examination of a high school music education program, Seifried (2006) found that there were many students who would not have been involved in school music if it were not for the guitar class. Specifically, Seifried examined a secondary school in Virginia with the intent of gaining a better understanding of the impact rock and popular music had on school music education programs. Ninety-nine student surveys were collected to determine self-reported attitudes of students toward school and academic achievement. From the pool of returned surveys, 14 students were selected to participate in interviews. In addition, two focus group sessions consisting of eight randomly selected students from guitar classes were held after interview data were analyzed. Whereas, other music programs within the school focused on performance and uniformity, the informal learning context created in guitar class allowed for students to learn music that they identified with at their own pace. Research suggests that intrinsic motivation, as well as the development of student musicians, is enhanced when students are given the freedom to choose the music they work on (Lehmann et al., 2007). Additionally, environments in which no demand or threat is perceived by students are more likely to result in peak experiences (Lehmann et al., 2007).

The importance of allowing student choice within a learning environment was evident in Seifried’s classroom, and was also emphasized in the research of Abrahams (2010). Abrahams reported that students were given a voice when they were allowed to choose music to perform in school that they enjoyed from their experiences outside of
school. Abrahams’ research, which included a population of 80 high school students involved in choral and instrumental ensembles from five separate high schools, highlighted the value of learning experiences that students perceive to be important. These students were given the task of arranging or adapting a version of a holiday song/carol to be performed on the winter concert program, without the direct guidance of a teacher. Data were collected in the form of teacher and student journals; periodic video recordings of rehearsals; and semi-structured interviews with teachers and students. Abrahams asserted that when students deem music teaching and learning to be meaningful, there is a strong likelihood that such learning will be long-lasting. Additionally, Mornell (2009) reported that when individuals feel responsible for their performances, they perceive them to be intrinsically motivated.

Green (2006) investigated the problems and possibilities of incorporating aspects of informal music learning practice in the secondary music classroom. Participants in Green’s study were eight classes of Year 9 students (ages 13-14) from eight separate schools in England. Interview sessions with participants served as the primary means of data collection. The inclusion of popular music within an informal learning context was found to offer more autonomy to the learners, therefore increasing the learners’ capacity to carry on learning independent of their teachers. Thus, informal learning contexts were able to motivate students to develop skills that could encourage further participation in music-making beyond school boundaries.

Feichas (2010) also concluded that informal learning gave students autonomy, inviting students to be active in their own learning process. Feichas took an ethnographic
approach to researching 40 first-year university students’ attitudes toward learning music. Questionnaires, interviews, and observations were collected over three months, taking into account students’ backgrounds as characterized by experiences in popular music, classical music, or a mixture of the two. Feichas suggested that an informal setting for music learning raised students’ awareness as a result of the need for reflective self-assessment. Additionally, the researcher noted that informal learning contexts increased the level of students’ motivation.

Lamont et al. (2002) compared the factors that account for distinctions between music at school and music at home. Participants in phase one of the researchers’ study were 1,478 students between the ages of 8-14, and 42 teachers from public schools in England. Students filled out questionnaires concerning their musical experiences, and semi-structured interviews were held with teachers. In the second phase of data collection, 134 students were selected based on their answers to the questionnaire to engage in semi-structured interviews and focus group sessions. The researchers found that less formal ways of learning to play an instrument were increasingly popular, and that a large number of older students were engaged in either peer or family-supported self-teaching. They concluded that more students were engaged in informal music-making outside of school than were involved in formal music-making within the school setting. Mak (2004) stated that student motivation would drop if connections could not be made with personal or professional benefit. It comes as no surprise then that students in Lamont et al.’s study made a conscious decision not to participate in school music due to school music’s perceived lack of significance.
Jaffurs (2004) investigated how five young students developed and formed a rock band with the intent of describing the musical environment that students create when they make music that they deem meaningful. The purpose of the study was to then carry these principles into the classroom with the hopes that they might foster greater student achievement. Two band rehearsals were observed and videotaped, and field notes were taken. In addition, after the second rehearsal participants watched the video and, in a think-aloud protocol, provided feedback on how they were rehearsing. Parental interviews were also held. Jaffurs identified themes of peer learning and peer critique within the rehearsal setting. Students collaborated to work toward a common goal without a teacher figure taking control or offering guidance. After incorporating elements of the informal learning environment that the researcher observed in the students’ rock band, Jaffurs found success in facilitating student-directed learning in an elementary school classroom.

Collectively, these researchers (Abrahams, 2010; Feichas, 2010; Green, 2006; Jaffurs, 2004; Lamont et al., 2002; Seifried, 2006) found that students were more motivated to participate in school music when instruction occurred in an informal music context, allowing for autonomy among student learners. Students were more likely to teach themselves how to play instruments outside of school than participate in programs that they did not find relevant, and were more likely to play music that they enjoyed and had chosen for themselves (Lamont et al., 2002; Renwick & McPherson, 2002).

Relevance. The amount of relevancy that a student assigns a given topic has major implications for whether or not a serious commitment to the learning process will
be made. Green (2006) suggested that the outcome-oriented musical goals of teachers have clouded the real purpose of music education, and that educators should revisit the musical learning process. Whereas performance goals within one particular style of music may not appeal to all students, there may be authenticity in the learning experience that is provided in informal learning contexts. Green referred to this learning experience as *music learning authenticity* rather than *musical authenticity*.

Lamont et al. (2002) support Green’s position noting that as students aged, they subsequently dropped out of the school music program. The researchers attributed this dropout to the conscious decisions being made by students who realized that the music instruction being offered in the school was highly specialized, requiring considerable instrumental skill, and not necessarily relating to student interests or career goals. Students’ self-perceptions of ability and expectancies for success or failure in any given context are strong indicators of success (Lehmann et al., 2007). It is understandable then that students from the research of Lamont et al. chose to learn music on their own time in informal settings where they could pursue musical skills that pertained to their interests and likely led to greater perceived success. If students view school music as a highly specialized subject for individuals with considerable skill, then music classes may lack any tangible relevancy to their lives (Lamont et al., 2002). Abrahams (2010) recognized the rich musical engagements that students have outside of the classroom, and asserted that when teachers are able to bridge the gap between students’ personal engagements and school experiences involving music, the relevancy of school music is enhanced.
Vygotsky (1926/1997) asserted that before involving students in any activity, the teacher should investigate whether the student is ready for it – whether the student is ready to act on his own with the teacher left to simply guide activity. Accordingly, Vygotsky posited that content should be framed in a way to peak students’ interests. Topics that are entirely new, as well as entirely old, are incapable of arousing one’s interests. Instead, to insure success, the study of any object should be made the student’s personal affair (Vygotsky, 1926/1997). If the goal is to introduce a new object to a student, then the starting point should be an interest that already exists, so that the student can proceed based on what is already known and familiar (Vygotsky, 1926/1997).

Vygotsky emphasized that the construction of the entire education system should be related to everyday life, suggesting that instructional content should derive from what is familiar to the student, what sparks interests in a natural way.

**Content versus learning style.** Lamont et al. (2002) and Green (2006) uncovered an interesting division in student perceptions of relevancy. Within a music lesson, students may relate to more than just the specific music content – they may also relate to the actual process that is being used to present information. Folkestad (2006) reported that what many students would like in school is more of the musical activities and learning that they engage in outside of the classroom. Folkestad further explained that the vehicles of knowledge construction that students are introduced to when they enter school serve as alternatives to the already established ways that students have developed to organize and gain knowledge. Allsup (2003) also recognized this distinction between in-school and out-of-school practice, stating that while children often work, and ultimately,
are assessed individually within the classroom, much of the learning activities that occur outside of the school are socially shared. Thus, music skills that are taught separately and mechanistically, lacking relevance to students’ socially composed framework for knowledge construction, are not retained (Pogonowski, 2002). In sum, these researchers (Allsup, 2003; Green, 2006; Folkestad, 2006; Pogonowski, 2002) clearly identified an importance in not only the content that is to be taught to students, but also the way in which that content is taught.

**Personal Autonomy**

Reflective practitioners in music education continually reevaluate the goals they have set for their students and the strategies they use to address those goals. Lebler (2007) suggested that in areas of study where the principal concern is skill and knowledge acquisition, transmission approaches to instruction might be appropriate. However, when the development of self-directed learning skills are of importance, then students need to be able to set the direction of their own work and provide appropriate assessment of their own learning. Thus, students’ ability to self-monitor is a necessity for the effective functioning of an informal learning context (Lebler, 2007).

Lebler (2007) investigated an Australian conservatory where instructors utilized an alternative approach to the master/apprentice model of teaching within their bachelor of popular music program. Through the collection of journals, a survey, and interviews, Lebler examined the prominent principles of this informal learning context. Participants in this study were first-, second-, and third-year students in the bachelor of popular music program. Forty-one of the 75 students in the program replied to the survey that was
collected in 2006. Lebler found that self-monitoring was especially important for students. Almost all students saw their own opinions regarding their performances as their most often used source of feedback, with comparison and feedback from band mates, peers, and friends all outranking the importance of teacher feedback. Additionally, greater student autonomy and self-efficacy resulted from students’ reflections on performance through recording, self-reflection through self-assessment, and peer assessment. Mornell (2009) also reported that when students are given the choice, they choose to receive less feedback from teachers. In fact, too much feedback has been shown to be counterproductive (Mornell, 2009). Alternatively, when comments about performance are delayed rather than concurrent, training effects can be strengthened and retention increased. Mornell suggested that possible reasons for this could be that (a) with less teacher feedback, students were able to evaluate their performance themselves, and that (b) the teacher feedback could have been interfering during a critical period of time when students were attempting to create their own assessments of performance.

According to Lebler (2007), informal learning contexts serve as an effective venue for developing autonomous musicians who will be able to engage in lifelong musicking. This conclusion supports Green (2008a), who found that the autonomy given to students to direct their own learning positively benefited students’ motivation and educational achievement. The informal and self-governing nature of autonomous learning was seen to be inherently accessible to a wide range of learners. Responses given through student interviews in Green’s (2008a) study showed that traditional approaches to instruction were less enjoyable precisely because they involved receiving instructions
from an outside source: teachers. Students attributed their enhanced sense of personal responsibility and conscious awareness of how to improve their own learning to their increased autonomy. Students also indicated that the autonomous learning experience was more satisfying than teacher-directed learning, and had a positive impact on self-confidence (Green, 2008a).

Abrahams’ (2010) research differed from the research of Green in that the researcher worked with high school music students involved in school ensembles rather than middle school-aged children in general music classes. Abrahams’ participants were placed in groups by teachers and were responsible for arranging a piece of music for performance by aurally copying a recording. These students, being drawn from high school music ensembles, did not face the same motivational issues that would have been present in the London secondary schools. Still, axial coding identified individual and group autonomy as the central phenomenon in Abrahams’ research project.

According to Green (2006), Lebler (2007), and Abrahams (2010), informal learning contexts can serve as a catalyst, or training ground, for developing self-monitoring and self-assessment skills, which are invaluable tools for students to become independent and self-directed musicians.

**Democracy in the Classroom**

Ideals of democracy within the classroom closely coincide with the presence of autonomy within informal music settings. Researchers have investigated the process of knowledge construction and skill acquisition among children for many years. Westerlund (2006) claimed that expertise is more likely to be supported in settings where teachers
serve as participants in the learning process rather than instructors in the traditional sense of formal education. According to this view, a mutual awareness of goals by teacher and student creates a more likely context for solving real-life situations. There is no longer a master teacher serving as a gatekeeper to knowledge. In agreement with this rationale, Allsup (2003) proposed that if band programs provided a venue for students and educators to come together to share and create music, educators might be able to bridge a growing cultural divide between themselves and their students.

Dewey (1944) suggested that for schooling to be most effective, students should be given the opportunity to exercise their knowledge in a social sense. Social efficiency as an educational purpose facilitates shared and common activities, enabling students to gain broader viewpoints, and perceive things from multiple perspectives that they may have been ignorant of beforehand. The social construction of skills and knowledge gained from democratic activities makes these understandings transferrable to out-of-school situations (Dewey, 1944).

Westerlund (2006) focused on whether garage bands, as an informal learning environment, could develop musical expertise. Westerlund advocated that constructing carefully planned and progressive teaching strategies is not enough – researchers need to identify and learn from environments that already exist where expertise is being cultivated. The example of teachers who constructed popular music curriculum in Green’s (2006) study is an example of an approach that Westerlund warned against. Even though the teachers’ popular music curriculums were nominally innovative, they placed
the content of the popular music idiom out of context, thus altering an informal learning environment already primed for developing musical expertise.

Allsup (2003) was interested in how small group music-making in the form of mutual learning communities could affect how groups defined themselves. Nine high school instrumentalists, ages 14-17, composed and analyzed music in two mutual learning communities. Each group met 11 times over a four-month period for 2.5-hour sessions. Participants were involved in the design and implementation of the study, as well as in the reflection and the analysis of their experience. The researcher also kept field notes and recorded personal reflections. Interestingly, given the choice, one group composed in a traditional, classical style, while the other used a garage band model. Allsup found that, provided the opportunity and the space to explore freely and work democratically, high school instrumental students created musical contexts with which they were familiar. Allsup reported that, when given the chance, band students could break out of roles previously defined for them and create opportunities to expand their roles in the ensemble. Each participant of the study acknowledged the advantageous nature of the cooperative learning that took place in the group modeled after a garage band. One student noted that the resultant conditions of democracy provided a framework for unheard voices, consequently leading to the potential for self-actualization (Allsup, 2003).

Wiggins (2000) also determined that elements of democracy laid the groundwork for unheard voices and increased the potential for self-actualization. The researcher’s purpose was to define the characteristics of shared understanding among children who
worked together to create original music. Wiggins used discriminant sampling of three past studies, which included a third, fourth, and fifth grade general music classroom. Data were collected through teacher journals, audiotapes, videotapes, reflections, field notes, and teacher interviews. In addition, three examples of compositions depicting shared understanding among students were chosen from a collection of 600 of the researcher’s past students. These three examples included one first-grader, and six fifth-graders.

Wiggins found that the rich and safe environment that was created while working within groups promoted and nurtured independent musical thinking. Students felt at ease generating original musical ideas, were able to obtain immediate feedback from peers, and were forced to think critically about their contributions to the group. Wiggins concluded that shared understanding within a group that is creating music together reflected cultural and media influences, as well as concepts learned in and outside of the classroom. A group’s vision of a work in progress exceeded the ideas of any single individual as group members judged the merit of each other’s ideas based on their interpretations of the group’s shared vision.

The collaborative efforts of the students involved in Wiggins’ and Allsup’s research resulted in the formation of a combined group expertise that often surpassed the capabilities of any singular member. The foundational element of the democratic system of learning investigated by these two researchers was the effective use of dialogue. Allsup (2003) referred to cooperative learning as being a basic tenet of organizational democracy and a primary vehicle for the construction of knowledge. Participants learned more from their peers than from working individually as the divisions between individual
knowledge and the shared knowledge of the group became blurred through communal interactions (Allsup, 2003; Wiggins, 2000).

**Student-centered learning.** The value of student-centered learning is essential to an effective informal learning environment. The guitar program studied by Seifried (2006) was partially student-driven, with students often determining the direction of the course based on which recordings and what interests they brought to class with them. The teachers in Green’s (2006) study unanimously expressed that students were more engaged and motivated in class work as they worked cooperatively towards musical goals. Mueller and Fleming (2001) cited research that reported children working democratically were happier, more productive, and more creative than children who were led autocratically. Autocratically led children were found to be more academically frustrated, aggressive, and less able to initiate work than their democratic counterparts. Jaffurs (2004) identified the democratic nature of the informal learning context of a student-led rock band, noting that the locations, times, and lengths of rehearsals (in addition to the styles of music played and which instruments were used), were all determined together as a group. Researchers suggest that informal music settings provide a vehicle for cooperation and democracy within the music classroom (Allsup, 2003; Green, 2006; Jaffurs, 2004; Westerlund, 2006; Wiggins, 2000). Accordingly, teachers do not have to explicitly direct learning, but rather, can join the learning process as students work together toward goals that are self-directed, enjoyable, and relevant to student interests.
**Peer-directed learning.** Westerlund (2006) argued that communities where students support one another in knowledge construction are more likely to support the development of collective expertise. Peer-directed learning refers to a form of learning through being taught, a conscious approach that is taken by students to explicitly teach skills to one another (Green, 2008a). The peer teaching present in Green’s (2008a) research project differed from the expert-to-novice teaching relationships that often exist between teacher and student because (a) regardless of teaching method, learners experienced a qualitative difference between being taught by a peer versus being taught by someone designated as a teacher; and (b) observers and learners reported that peers did use different methods than teachers.

Jaffurs (2004) identified elements of peer-directed learning among her students as well, observing that members of a garage band analyzed the mistakes of others and gave suggestions for improvement. Participants took the initiative to ask for help and advice from each other during a rehearsal period. Goodrich (2007) also observed that less experienced musicians were able to learn from more experienced musicians in a high school jazz band setting. Goodrich carried out an ethnographic study of a 17-member high school jazz band during the course of a single academic year. The researcher observed rehearsals, conducted formal and informal interviews with faculty and students, and collected audio and video recordings of concerts and rehearsals. Goodrich found that peer mentoring contributed to the ensemble’s success by enhancing the social growth of students, as well as heightening the students’ rate of musical development. Mornell
(2009) reported that self-directed rehearsals could create feelings of autonomy and build competence in learners.

Cognitive elaboration theorists provide an interesting perspective in regard to the value of peer-directed learning. They claim that for information to be retained and related within one’s memory, the learner must engage in some type of cognitive restructuring or elaboration of the material which they have been taught (Slavin, 1995). Accordingly, one of the most effective methods of elaboration is explaining (teaching) that material to someone else.

**Group cooperation.** Another aspect of student-centered learning is the value of group cooperation. Green (2008a) described group cooperation as including learning that occurs more or less unconsciously or even accidently, simply through the collective actions of a group. This includes the implicit learning that transpires through music-making, watching, listening to and imitating each other. Mornell (2009) stated that knowledge could be acquired through watching someone else as long as an individual had experience related to the activity being observed. Group cooperation also transcends rehearsal times to involve the learning that takes place before, during and after music making (e.g. deciding who will perform what parts, sharing ideas about music content, and seeking each others’ opinions) (Green, 2008a). Allsup (2003) posited that, at the heart of all democratic learning is dialogue, “ . . . where power is negotiated through shared decision-making” (p. 26).

Collaborative work generates experiences in which the combined expertise of the group can surpass that of its individual members (Wiggins, 2000). As students work
together within common contexts, divisions between individual and shared knowledge blur, and communication and shared problem solving bridge gaps of understanding among group members. The resultant negotiations that take place as individuals explain and justify their own ideas enhance learning. Rogoff (1990) explained that argumentation, an effort by group members to come to closer understandings, could shift individuals’ perspectives, identify strategies for problem solving, and lead to working definitions that were considered collectively valid. Furthermore, mutually generated work processes among students and teachers result in greater creativity (Wiggins, 2000).

Wiggins (2000) provided specific examples of how group composition activities impact student engagement and interactions. Group members were observed judging the merit and appropriateness of individual ideas against personal interpretations of the collective vision of the composition in progress. Students expressed musical ideas by singing and playing rather than using verbal descriptions. The process of working within groups created a safe environment that nurtured independent musical thinking and facilitated the generation of original musical ideas. Students’ ability to initiate musical ideas was strengthened as a result of having to accommodate others’ viewpoints, explain their own ideas, and collaborate with peers. Collaboration also led to an increase in students’ knowledge base for making musical decisions (Wiggins, 2000). Allsup (2003) supports these claims. Allsup reported that students discovered more due to the input of peers.

The developmental perspective on cooperative learning further suggests that collaborative activities in school classrooms promote student growth because children of
similar ages are likely to be operating within one another's zones of proximal development (Slavin, 1995). Vygotsky’s zone of proximal development is defined as “... the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 86). Developmental theorists would posit that opportunities for collaboration, in the form of student discussions, arguments, and presenting one another’s viewpoints, are critical with respect to student achievement (Slavin, 1995).

Overall, the research cited in this review reveals the positive impact of the presence of democratic learning in informal music environments through peer-directed learning and group cooperation. Democratically constructed musical environments facilitated student-led activities that resulted in increased musical engagement and achievement.

**Social and Cultural Implications**

Informal music instruction and the inclusion of popular music into the school curriculum have social and cultural implications for music educators. Seifried (2006) recounted a student who expressed that she would neither be hanging out with the people that she now knows, nor jamming outside of a school context if it had not been for her guitar class. Allsup (2003) reported that students who never knew anything about each other formed a progressive ensemble after being given the opportunity to compose music in a mutual learning community. Green (2006) addressed the importance that popular
music could have in providing safe cultural spaces where students could conceal private cultural identities.

Music has traditionally been viewed as an important component to identity construction within youth culture. Campbell and Beegle (2007) reported that within the United States, the adolescent consumption of popular music is a multi-billion dollar industry. Additionally, 70% of all pop recordings are bought by people ages 12-20 (Campbell & Beegle, 2007). Campbell and Beegle (2007) detailed that music has been found to “... provide adolescents with a medium through which to construct, negotiate, and modify aspects of their personal and group identities, offering them a range of strategies for knowing themselves and connecting with others” (p. 221). Campbell and Beegle were concerned with the significance of music and music education to middle and high school adolescents. They collected 1,155 essays from American students 13-18 years old. These essays do present a certain bias because they were submitted to a “Ban the Elimination of Music Education in Schools” essay contest run by Teen People magazine and themusicedge.com. 78% of the respondents were female. Nevertheless, coding of the essays identified the importance that music had socially and emotionally for these teens, as well as outlined the importance that music had in identity formation. Frith has also acknowledged that identify formation is one of the main social functions of music (as cited in Campbell & Beegle, 2007).

Alternatively, Williams (2001), in a research study examining issues relating to popular music audiences, suggested that popular music is in actuality a tool that provides routine rather than emotional support or identity construction. Participants in Williams’
study were 13 teenagers from a single school in London. Williams found that popular
music had practical uses for youth culture and should be seen in terms of its
*everydayness*. Teenagers in this study used music as a means of claiming space, marking
periods of personal time, and simply avoiding the discomfort of silence. Popular music
was described in the same way that participants related to other media such as films,
television, and video games. Williams advised that it might not be desirable to separate
music from its interconnectedness with various other forms of media.

What Williams uncovered is that whether students consciously identified with
popular music or not, pop culture had a significant presence in the course of their daily
lives. As Westerlund (2006) pointed out, by encouraging students to interact with music
in an informal music setting, there is no longer a need to bridge any gap between
teachers, the classroom, and the popular music culture. Instead, teachers are able to
provide tools for their students to become full participants and contributors to pop
culture.

One of the newest tools that is becoming readily available in school classrooms is
computer-based technology. Dunbar-Hall and Wemyss (2000) cited the increasing
availability of digital technologies as a means of accessibly manipulating sounds. New,
user-friendly platforms enable a broader range of students to participate in music contexts
once deemed reserved for those students possessing enhanced skills. Dunbar-Hall and
Wemyss suggested that electronic technology provides music education with new, added
dimensions of musical sound and production. They claimed that popular music exists as a
network of styles linked to various ethnicities, ideologies, religions, and sexualities, and
that the integration of technology and popular music provides means through which teaching and learning can facilitate students’ interactions, artistic expressions, skills, and attitudes in relation to these cultural markers. Heuser and Thompson (2010) also related the social implications of technology through the lens of informal learning. These researchers identified the Internet as a learning tool that has virtually unlimited scope in addressing the interests of students, while further developing the progression of music learning from *listen-copy-play*, to *watch/listen-copy-play*.

**Summary**

Participation in informal learning contexts students, where students can work cooperatively to attain self-directed and intrinsically motivated goals, resulted in increased listening skills; motivation; achievement; enjoyment and cooperation among students. Additionally, involvement in informal learning contexts has social and cultural implications, as students are able to interact with music in a manner that is perceived to be more relatable than traditional contexts. Researchers have also made clear that a teacher’s role is not to simply broadcast irrelevant musical information to students who may or may not be listening (Lehmann et al., 2007). However, while the benefits of student-centered, informal learning experiences have been expressed (Green, 2008a), there remains concern by researchers about the role of the teacher in informal learning contexts. Within an informal learning context, teachers should not take on the role of supervisor, administrating students’ work while students seek out new knowledge. Instead, teaching should involve the construction of ideas through interactions and
dialogue between the known and the unknown, teacher and students, and students with one another (Georgii-Hemming & Westvall, 2010).

**Social Constructivism**

A well-designed curriculum is crucial to an educator’s success in engaging students and enabling them to progress in any given subject. Within music education, the value of placing students within informal learning contexts has been explored in the preceding sections, revealing that autonomous music-making within groups of like-minded peers can enhance student motivation, perceptions of content relevance, and skill acquisition. What has yet to be explored is *how* informal learning contexts situate learning in a way that enables students to learn differently than when they are in a teacher dominated classroom. The theory of social constructivism may offer insight into how students’ interactions with one another in an informal learning context promote learning.

Education is not a matter of merely telling and being told. It is an active and constructive process (Dewey, 1944). The social constructivist view of learning frames knowledge construction as resulting from processes of interaction, negotiation, and collaboration (Palincsar, 1998). Students learn more when actively engaged in their own learning. An active approach enables students to learn content as well as process. Thus, the teacher’s responsibility is to create educational environments that permit students to assume responsibility for the construction of their own knowledge structures (Brooks & Brooks, 1999; Marlowe & Page, 1998). Constructivist learning environments include authentic tasks and learning activities that require understanding similar to the understanding essential to real world settings (Kauchak & Eggen, 2003).
Social sources serve as the foundation for individual development, which includes higher order mental functioning (Palincsar, 1998). Vygotsky assumed that children were inherently social beings, partaking in social exchanges that served to develop higher cognitive practices (Rogoff, 1990). Social guidance provides children with opportunities to participate beyond their own abilities and internalize socially practiced activities, which in turn advance their potential for independently managing problem solving (Rogoff, 1990).

Vygotsky (1978) defined a zone of proximal development that discriminated between one’s actual development level as determined by independent problem solving, and the level of one’s potential development as determined through problem solving in collaboration with more capable peers or adult guidance. Rogoff (1990) explained that, from a Vygotskian perspective, individuals make use of joint decision-making to expand understanding and skill. Thus, ideal partners are not equal in ability.

There are interesting parallels between social constructivism and the tenets of symbolic interactionism. Blumer (1969) based symbolic interactionism on three premises:

1. People act toward things on the basis of the meanings that the things have for them.

2. Meaning arises out of the social interactions one has with peers.

3. These meanings are handled and modified though an interpretative process as people deal with the things they encounter.

Symbolic interactionism derives from the principle that human society consists of people engaging in action, with meaning constructed through the activities of people as
they interact. Therefore, human conduct is formed through social interaction (Blumer, 1969).

**Role of the Community**

Social communities are, in part, systems of social relations from which individuals can construct knowledge. Activities, functions, and understandings do not exist in isolation of these broader systems of relations (Lave & Wenger, 1991). The mind emerges through participation in sociolinguistic practices of community (Garrison, 1995). In addition, objects in a child’s world have a social history and function that would not have been discovered without aided exploration. “The usual function of a hammer, for example, is not understood by exploring the hammer itself . . . The child's appropriation of culturally devised ‘tools’ comes about through involvement in culturally organized activities in which the tool plays a role” (Newman, Griffin, & Cole, 1989, pp. 62-63). Other tools could be quite different, such as musical instruments.

**Role of the Learner**

From the learner’s perspective, constructivist learning contexts can be viewed as social situations that are enhanced with shared inquiry, reflection, metacognition, and personal assessment (Scott, 2006). Students become questioners who reflect on their comprehension, and are able to recognize misunderstandings. The process of interacting with one’s environment and discovering new concepts for themselves leads students to think critically and more effectively solve problems (Marlowe & Page, 1998).
Role of the Teacher

While teachers may use direct instruction to transmit new knowledge to students, the learning environment can become constructivist when students apply this knowledge toward musical results (Scott, 2006). Recitation of musical fact is not a sign of learning. Instead, observing how students might reason with musical terms such as phrasing, tone production, or technique can offer greater insight into student understanding (Zarro, 2003). For example, can students justify why their musical interpretations are valid? However, it would be incorrect to label activity-based education as constructivist solely because students are learning by doing. When teachers are able to situate learning in a way that provides students opportunities to connect new learning to prior understandings and interpret teacher-taught information through experience, they are exercising a constructivist learning approach (Scott, 2006).

Teachers should engage students in environments where students are able to extend current skills and knowledge to higher levels of competence (Rogoff, 1990). Unlike traditional settings where learners must adjust their learning style to the instructional style of the teacher, constructivist settings would see the teacher adjusting to how students learn (Zarro, 2003). Teachers should scaffold child performance to control frustration and risk in problem solving, and demonstrate models of the act to be performed. The teacher may also reduce the number of steps required to solve problems by simplifying the task into more manageable components, identifying critical differences between what the student has produced and the ideal solutions, and sustaining the pursuit of goals through motivation (Wood, Bruner, & Ross, as cited in Rogoff, 1990).
The constructivist teacher is not seeking to fill an empty vessel (student) with information, but would rather have students discover new answers themselves to questions they had a role in asking (Zarro, 2003). In this way, constructivism relates to the critical pedagogy of Freire. Freire (1970) warned against turning students into receptacles to be filled by teachers taking a narrative approach to education. In the narrative approach to education, the relationship between student and teacher consisted of the teacher narrating a subject as students were forced to mechanistically listen to and memorize content. Freire referred to this concept of education as the banking system, with the scope of education limited to students receiving, filing, and storing information bestowed upon them by an external source: the teacher. Freire proposed that teachers should become co-investigators of problems alongside their students, engaging in an active dialogue where both teacher and students are jointly responsible for the process they take in creatively responding to authentic, real-life problems. Students are provided an opportunity to pose and solve problems alongside their teacher, permitting them the chance to teach the teacher, which effectively results in a transformation of all who are involved in the learning process (Abrahams, 2005). Thus, as in a constructivist framework, teachers should (a) create an educational context that grants students ownership over their learning, (b) provide materials and supplies appropriate to learning tasks, and (c) responsively mediate teacher and student interactions (Brooks & Brooks, 1999). The challenge that arises for music educators is finding balance between the roles of authority figure and facilitator while assisting student musical development in relation
to questions and problems negotiated within a collaborative learning community (Scott, 2006).

Bruner (1990) claimed that the constructivism of cultural psychology does not insist that there is only one way of constructing meaning, let alone one correct way. Yet, the value of cooperative learning, where peers are able to work together, providing motivation, guidance, and feedback, does suggest that circumstances in which students interact in social settings benefit student achievement (Rogoff, 1990). The tenets of social constructivism, stating that knowledge is constructed through the social interactions of peers who learn alongside their teachers as partners rather than subjects, support the style of learning that naturally occurs within an informal learning context.

Summary

The growing separation that students are experiencing between school music and ‘other’ music has motivated educators to incorporate elements of popular music content and informal learning contexts within their classrooms to situate student learning in authentic environments. Analysis of the literature has revealed that informal learning contexts have been able to increase student motivation, autonomy, and perceptions of relatedness. Additionally, student-centered learning in the guise of peer- and group-based instruction has resulted in enhanced student achievement. The social construction of knowledge between students and teachers appears to emulate realistic circumstances in students’ lives, consequently enhancing the meaning that school music experiences can have, and thus increasing the likelihood of knowledge transfer and retention. However,
researchers have expressed concern with the direction of informal learning pedagogy, and the seemingly ambiguous role of the educator.

While there has been some research regarding the role of informal learning contexts in instrumental settings, the instances of qualitative investigation into the specific population of adolescent instrumental ensembles have not been substantial. Furthermore, those studies that have taken place often included researchers using their own students, which may have influenced student responses in interview settings (Allsup, 2003; Jaffurs, 2004; Seifried, 2006). Alternatively, the current study included participants from three ensembles that were not conducted by the researcher.
Chapter III

METHODOLOGY

Rationale for the Design

The purpose of this research was to understand the perspectives of adolescent music students as they engaged in informal music learning experiences within the context of their school music ensembles. The researcher was especially interested in the social interactions that occurred when students were rehearsing music without the direct supervision of their teacher/conductor. Specific research questions framing this study were:

1. To what extent does participation in an informal learning context impact student practice?

2. To what extent does participation in an informal learning context impact student musical achievement?

3. To what extent does participation in an informal learning context impact student experience in their school ensemble?

4. To what extent does participation in an informal learning context impact student self-perception?

Research Design

Researchers (Bernard, 1994; Judd, Smith, & Kiddler, 1991; LeCompte & Preissle, 1993) agree that it is important to relate choice of research paradigm to the nature of the questions the study is designed to answer. Merriam (1988) affirmed that “. . . how the
problem is defined and questions it raises determine the study’s design” (p. 29). The questions asked in this study address the participants’ experience in relation to informal learning contexts. Asking broad, open-ended questions that are focused on a single phenomenon or concept is a central component to qualitative research, (Creswell, 2009) and focusing on the participants’ experience within a given context where a phenomenon is present is a distinctive quality of phenomenological research (Moustakas, 1994).

This study was conducted and written fusing a qualitative approach suggested by Moustakas, (1994) Charmaz, (2006, 2010) Corbin and Strauss, (2008) and Plano Clark and Creswell (2010). Creswell (2009) defined qualitative research as:

. . . a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures; collecting data in participants’ settings; analyzing the data inductively, building from particulars to general themes; and making interpretations of the meaning of the data. The final written report has a flexible writing structure. (p. 232)

Bressler and Stake (1992, p. 79) delineated seven principles of qualitative research. They are:

1. It is holistic.
2. It is empirical.
3. It is descriptive.
4. It is interpretive.
5. It is empathic.
6. The direction of the issues and foci often emerge during data collection.
7. When done well, its observations and immediate interpretations are validated.
The phenomenological research design is appropriate when trying to understand the perspectives of participants as they engage within a particular context (Bogdan & Biklen, 2010). The researcher’s goal was to reduce the experiences of the participants with a particular phenomenon to a description of its universal essence by identifying significant statements that could then be clustered into themes (Moustakas, 1994). Participants in this study were engaged in informal music learning experiences within the context of their school music ensembles. The purpose of this study was not to find facts or causes, or draw a single truth from the data. Rather, the researcher attempted to identify the essence of adolescent instrumental music students’ experiences within an informal learning context, as described by the students. Textual and structural descriptions portrayed what the participants experienced and the setting that influenced the participants’ experience within an informal learning context (Moustakas, 1994). Therefore, the phenomenological design offered the best strategy to approach the research problem.

**Research Frameworks**

Green’s (2006, 2008a) research on informal music learning was the strongest conceptual influence on the current study and was essential to the development of its design and methodology. Additionally, Abrahams’ (2010) research was significant in providing a clear connection with how the researcher might transfer Green’s research with popular music in British general music classrooms to more formal ensemble contexts within American schools.
Through an extensive literature review, the researcher examined multiple models for how teachers have attempted to include informal music practice in their classrooms, and how they collected data. Phillips’ (2008) and Creswell’s (2009) books on research methodology and design further educated the researcher to analyze and interpret these studies, and prepared the researcher to develop a model for presenting the current research.

**Theoretical Framework**

This research project was a phenomenological study. The researcher utilized a qualitative approach and was concerned with identifying the essence of the participants’ experience within an informal learning context (Creswell, 2009). The phenomenological approach attempts to articulate individuals’ lived experience while analyzing the sociopolitical context in which the experience is embedded (Hesse-Biber & Leavy, 2008). Phenomenology was originally conceived as a philosophical movement asserting, “the reality of a phenomenon can only be perceived within one’s experience with it, and therefore cannot be separated from that experience” (Plano Clark & Creswell, 2010, p. 239). The phenomenological research design has since evolved as an approach to describing phenomena of interest to research questions.

Although a phenomenological approach is an empirically based descriptive method, there is not one method that has been agreed upon by social scientists (Hesse-Biber & Leavy, 2008). Still, there are key characteristics of phenomenological research based on the assumption that all individuals have unique experiences of a phenomenon (Plano Clark & Creswell, 2010). Patton (2002) defined the foundational question of
phenomenology as: “What is the meaning, structure, and essence of the lived experience of this phenomenon for this person or group of people?” (p. 104). To determine the essence of a single phenomenon, the researcher must separate himself from any bias and preconceptions of said experience, and collect data from other people who have experienced the phenomenon. From this data, the researcher is able to identify significant statements regarding the meaning about the phenomenon, and report themes, descriptions, and the essence of the phenomenon (Plano Clark & Creswell, 2010).

In the present study, the phenomenological design emerged from a need to understand the essence of informal learning contexts as experienced by students in school instrumental music programs. Accordingly, the focus of the inquiry was not on how students learned material within an informal learning context, but rather on understanding the nature or essence of the students’ experience while immersed in an informal learning context. As a result, the researcher could better understand what learning within an informal learning context was like for the students who were part of the research study population (Van Manen, 1990).

To discover whether students perceived that informal instructional practices were effective strategies to engage and impact musicianship, the researcher applied the principles of social constructivism (Creswell, 2009; Corbin & Strauss, 2008; Plano Clark & Creswell, 2010). This worldview suggests that the basic generation of all meaning is social, resulting from interactions within a community (Creswell, 2009). Social constructivists maintain that individuals develop subjective meanings of their experiences in relation to their own historical and social perspectives (Creswell, 2009). Suitably, the
social constructivist worldview lends itself to a phenomenological research design that emphasizes individuals’ perceptions of experience. According to Patton, (2002) phenomenologists are committed to understanding phenomena from individuals’ perspectives, regarding reality as no more than what people perceive it to be.

Therefore, an objective of this research was to rely as much as possible on participant views of their learning experience within their peer-directed rehearsals, with a special focus on the musical interactions that students had with each other (Creswell, 2009).

To provide a clearer strategy of inquiry within the phenomenological theoretical framework, analytic strategies were drawn from grounded theory. These strategies include open and axial coding, conceptual saturation, comparative analysis, and memo writing. There were multiple stages of data collection and they can be characterized by the “. . . constant comparison of data with emerging categories and theoretical sampling of different groups to maximize the similarities and differences of information” (Creswell, 2009). The researcher viewed data analysis as an emergent process, recognizing the interactive nature of data collection and analysis (Charmaz, 2010) and the notion that it is “. . . only through interaction with data that relevant questions emerge” (Corbin & Strauss, 2008, p. 216). This perspective proved helpful when the researcher analyzed data in this study.

As a research design, phenomenology provided the most direct route toward understanding informal music learning experiences from the perspective of adolescent students enrolled in formal school music ensembles. Applying a social constructivist lens
furthered the ability of the researcher to understand and approach the data from multiple perspectives.

**Conceptual Framework**

Informal music learning provided the conceptual lens for this study. Green’s (2006, 2008a) research provided the basis of this understanding. A major tenet of the informal music learning experience is that students are able to choose the music they will learn – music that is already familiar to them that they enjoy and strongly identify with. According to Green (2006, 2008a), learning music within an informal learning environment consists of copying recordings by ear, with learning occurring in cooperative learning groups. Learning within groups involves discussion, watching, imitating and listening to one another, with skills and knowledge being assimilated in personal, haphazard ways according to musical preferences. The learning process involves listening, performing, improvising, and composing. Informal learning practice emphasizes creativity rather than the reproduction of performances.

There are a number of features that distinguish informal music practice from formal music practice. Allsup (2003) recognized formal learning context’s high priority on decontextualized knowledge and pure reasoning as being one defining difference. Lebler (2007) indicated that situations involving training in a particular set of skills or the acquisition of knowledge require an essentially transmissive, or formal, approach. However, when the goal is to develop self-directed learning ability, students may take on the role of teacher. Green (2008a) identified self-directed learning, peer-directed learning and group learning as elements of informal music learning. Jaffurs (2004) explained that
informal music learning does not consist of formal evaluation or teacher direction and guidance.

The lack of teacher direction is a significant component of informal learning contexts. As a result of this lack of teacher presence, sequenced, planned learning activities are rarely a part of an informal learning environment. According to Folkestad (2006), the presence of sequenced lesson activities is a hallmark of formal learning situations, while learning described as self-chosen or voluntary is characteristic of informal learning situations. Green (2006, 2008a) described the planned progression of music instruction present in formal learning contexts as including specially composed music and exercises. This advancement from simple to complex conflicts with the informal approach of beginning to learn music in holistic ways, such as starting with whole or real-world pieces of music.

Population

The researcher conducted this study in two schools over four months beginning in the fall of 2010. The teachers at the individual schools, Ms. Eriksson, Ms. Manuel, and Mr. Kalas, (all pseudonyms) agreed to serve as gatekeepers and provided the researcher with access to the students. Student participants in the study included 6th, 8th, and 9th grade students from two schools in the Mid-Atlantic region of the United States. Groups of three to seven students who had either volunteered for participation or had formed their own collaborative groups within instrumental ensembles were included in the data set. The researcher contacted the teachers who participated in the research project
because he recognized that they would be willing to participate and their students fit the target age levels for the study.

**Researcher Bias/Role of the Researcher**

As the principal investigator, the researcher was not involved in any direct teaching with the student population. However, the researcher was present to take field notes, distribute questionnaires, and conduct semi-structured interviews with students and teachers. The researcher introduced himself to all participants so that he would not appear as a stranger in their classroom.

In preparation for working in schools with teachers and students, the researcher completed Human Subjects training online through the Collaborative Institutional Training Initiative, and in person through the University of Delaware Institutional Review Board (see Appendix A).

Having read the research of Green (2002, 2008a, 2010), Abrahams (2010), and other researchers studying informal learning practices, the researcher brought a bias to this research, holding positive views of the musical benefits provided by participation in informal learning environments. The researcher assumed that student achievement would benefit from interactions with peers, and that students would be able to arrange familiar music with peers successfully. The researcher also expected that the approach that students would take in learning and practicing their music in the informal music context would be a drastic departure from their formal ensemble experience. As a result of their experience within the informal learning context, the researcher anticipated that students
would emerge as more autonomous music makers who would be more motivated and prepared to actively participate in music, in and outside of the school.

Based on the review of literature on informal music learning, codes were selected to deductively analyze the data. Codes were drawn from the themes of Green’s (2008a) research and the categories developed through open and axial coding within Abrahams’ research (2010). The codes selected also reflect the primary research questions being asked in this study. The codes served to organize observations, and inform the researcher’s construction of research instruments. The researcher remained open to new codes that emerged inductively from the data, and reshaped prior codes using techniques consistent with qualitative research.

**Procedures**

In the fall of 2010, the researcher identified three instrumental music teachers whom he believed would be open to having an informal learning research project conducted within their classrooms. The researcher knew Ms. Eriksson and Ms. Manuel as colleagues during undergraduate and graduate study at the University. Ms. Manuel recommended Mr. Kalas, a coworker at her school, to the researcher as a potential third teacher whose ensemble might participate in the study. The researcher met with each teacher separately to clarify research protocol. In addition to discussing the goals of the project, the researcher explained policies regarding the Institutional Review Board (IRB), conducting research in their school, the criteria to be followed, and the necessity of having parents or guardians sign consent forms for student data to be included in the research study (see Appendix B).
Each teacher selected an ensemble that they conduct, and allowed members of that ensemble to form a collaborative group with the intent of preparing for a music performance on their own, informally, without intervention from the teacher. The researcher met with each group of students on their first day of the project. On that day, general guidelines were provided for their participation. The researcher instructed students that they should select a song or piece of music from the Internet, YouTube, or personal music library that they would like to perform, and that they believed peers and family might like to hear at their winter concert. One additional stipulation was made for the string ensemble. They were asked to choose a selection that reflected a winter or holiday theme. Mr. Kalas’ and Ms. Eriksson’s students searched their personal music libraries via their iPods and phones to find a selection that the entire group could agree to play. Ms. Manuel’s students searched the Internet and discussed songs they had previously learned either in private lessons or by rote when determining which holiday or winter-related songs to perform. Students were told that they were not allowed to simply download the notation for the song from the Internet, or play from a method book that had a song already notated. Instead, the researcher directed the students to listen to the song that they chose to play, or watch a video of a performance, and then arrange a version of the song by ear with the members of their individual groups. The researcher informed each group of students that their teacher would not provide them with direct instruction, such as the note names or chord names for the songs they were arranging. While the researcher did allow students to write down notes to organize their arrangement, writing down the arrangement was not a requirement of the project. After
hearing the instructions, students had the opportunity to ask the researcher questions. There were no questions. Teachers provided students time during their ensemble class period to practice and rehearse their song. During the course of the research project, Ms. Manuel gave her students an average of 30-45 minutes, twice a week, to work on their arrangements. Ms. Eriksson’s class rehearsed an average of 30 minutes a week. Mr. Kalas’ class rehearsed for 45 minutes on the days that the researcher was present. Choice of music and instruments were left to each group to decide. The teacher did not fill the traditional role of a formal instructor during the course of the research study. During the last two weeks of the research project, the researcher informed the teachers that they could meet with the groups to provide additional feedback as an informal guide. Although teachers did not take on the role of a formal instructor, teachers could offer suggestions to the student groups.

Each time the researcher visited a site student rehearsals were videotaped. The researcher visited Mr. Kalas’ class nine times. Upon arrival, the researcher set up the camera in a practice room where the students rehearsed, and then left the students alone for the rest of the period. The researcher visited Ms. Manuel’s class six times. In addition, Ms. Manuel recorded groups rehearsing twice, and also recorded each of the groups’ final performances. The researcher visited Ms. Eriksson’s class three times. Ms. Eriksson videotaped one additional rehearsal and their winter concert performance. When present, the researcher did not interfere with any of the students’ rehearsals. At Rollins High School, the researcher sat in the back of the auditorium to observe the students and keep field notes. With Mr. Kalas’ students at Ashburn Charter School, the researcher viewed
the students through the glass window of the practice room, but was unable to hear the
dialogue inside. On two occasions, when the students rehearsed in the school lobby and
in the main band rehearsal space, the researcher was present and kept notes in the same
room as the students, but did not initiate conversations. With Ms. Manuel’s students at
Ashburn Charter School, the researcher set up a camera in the hallway where one student
group would rehearse, and then observed the other groups working in the main rehearsal
space. On two occasions, all of the string groups were located in one room, and the
researcher observed without interfering in the students’ rehearsal processes. The
researcher was not viewed as a stranger in the classroom. Students were aware that the
researcher was interested in the way that they were working together to create their
arrangements.

Data Collection Methods

Data included journals, field observations, group semi-structured interviews with
students, one-on-one semi-structured interviews with teachers, audio and video
recordings of student rehearsals and performances, and pre- and post-project
questionnaires.

Journals. Similar to Lebler (2007), Wiggins (2000), and Heuser (2008), journals
were used to collect data from student participants. Responding to journal prompts
allowed students time to reflect on their rehearsal experiences and then express
themselves in a safe and personal way. Every attempt was made to avoid leading
questions that might have negatively affected the validity of the study. Prompts from
Abrahams’ (2010) research were reviewed while preparing a similar guide for the current
research study’s participants (see Appendix C). Journal reflections were kept confidential, with student names being substituted for pseudonyms upon their collection. These reflections served as a valuable vehicle for understanding student perceptions of their own musical ability, and how they felt their rehearsals progressed throughout the research project.

**Questionnaires.** Pre- and post-study questionnaires were provided to students before and after students’ first and last rehearsals, and consisted of open- and close-ended questions. Seifried (2006), Green, (2008a), and Lebler’s (2007) use of questionnaires influenced the construction and purpose of the questionnaire used in this study. These questionnaires were used to obtain data concerning students’ practice habits and whether or not skills they may or may not have learned throughout the project had transferred to any new contexts. Similar to the research of Lamont et al. (2002), questionnaires also provided information concerning the participants themselves: what instruments they owned, what ensembles they participated in, and other relevant musical descriptors (see Appendix D). The researcher piloted an initial questionnaire with a group of 46 high school students attending a wind ensemble camp. After completing the survey, students provided feedback as to any unclear questions or language that was confusing so that the necessary adjustments could be made to enhance question clarity. This procedure helped to provide constructive and content validation for the questionnaire. In addition, a group of three music educators helped to vet the questionnaire and identify possible problems.

**Field notes.** While observing student rehearsals in the classroom setting, the researcher recorded field notes. The use of field notes was comparable to Jaffurs (2004),
Allsup (2003), Green (2008a), and Wiggins (2000). These notes helped to organize the researcher’s thoughts in a cohesive manner, and served as reminders for the researcher to refer back to events in the video at a later time. Field notes were used to describe the actions and reactions of participants. Extensive descriptions of student behavior and conversations were added after further analysis of video data. In-class observations provided in-the-moment information regarding the types of interactions that students had within an informal learning environment, and also reflected any indications of enhanced student achievement.

**Interviews.** The researcher conducted semi-structured student and teacher interviews to address each of the project’s research questions. Questions were open-ended, and the researcher used an interview guide to lead discussion (see Appendix E). After each interview, the researcher considered how changing elements of the guide might enhance interview continuity and participant comfort (Falk & Blumenreich, 2005). Gaining another perspective on student achievement and ability level from the teachers was particularly important for the researcher to balance any bias present in student responses. Additionally, interviews are a key component of any phenomenological research design, enabling the researcher to set aside personal experiences regarding a phenomenon and collect data from participants who have experienced it (Plano Clark & Creswell, 2010).

Teachers were interviewed individually and students were interviewed within their collaborative groups. Interviews were video-recorded to provide the researcher time to transcribe the interviews for further analysis, as well as attend to body language.
**Video/audio recording.** The use of video and audio recording for capturing students participating in rehearsals was integral to gaining an understanding of how students worked together in an informal learning environment. Video and audio recordings provided insight into how participants interacted, concurrently revealing the conversations and actions of multiple participants (Falk & Blumenreich, 2005). Video and audio recordings also served as an objective documentation of student interactions, providing valuable illustrations of the future findings of the study. Additionally, audio and video data from rehearsals enabled the researcher to identify specific moments in time that coincided with journal reflections or interview data, which could in turn provide a greater understanding of the informal music context and the participants’ perceptions of that situation.

**Data Analysis Procedures**

The researcher and participating teachers collected all data. All data, including participants’ conversations from audio and video recordings, were transcribed into Microsoft Word or Excel by the researcher. These programs made coding and comparing data much more accessible than using the original artifacts. Codes were selected to analyze data based on the research literature pertaining to informal learning environments (Abrahams, 2010; Green, 2008a). The researcher also reviewed data and memos for emergent themes that arose inductively from the analysis. Additional strategies that the researcher utilized from grounded theory included open and axial coding, which enabled the researcher to relate concepts to each other, as well as break the data apart and remain
attuned to the subjects’ views of their experience (Charmaz, 2010; Corbin & Strauss, 2008).

The first step in beginning the analysis was to read the data materials and watch the rehearsal videos from beginning to end. This process provided the researcher a window into the reality of the participants. While reading and watching video, the researcher kept memos to organize thoughts and initial reactions. The researcher labeled memos with concepts, and assigned provisional categories through the form of an integrative diagram (See Figure 3.1). The integrative diagram served as a visual device for depicting the relationships between the analytic concepts (Corbin & Strauss, 2008). Next, the researcher began the process of open and axial coding, going line-by-line to break apart transcribed data, delineate concepts, and look for relations. Through the coding process, the researcher began to define what was happening in the data and grappled with how the emergent themes related to the research questions (Charmaz, 2006). Focused coding enabled the researcher to identify the most significant of the earlier codes. Choosing more directed and selective codes and comparing the data enabled the researcher to refine the concepts and categories.

At this point, the coding process took the researcher to unforeseen areas with the research questions (Charmaz, 2006). After carefully reviewing the data and discussing the direction of the research with advisors, the researcher refined and focused the research questions to better capture the experience of the participants. This process is not uncommon within qualitative research, as the mode of inquiry is seen as an emergent process rather than the product of a single, logically and deductively sequenced study.
(Charmaz, 2010). According to Corbin and Strauss (2008), “. . . it is only through interaction with data that relevant questions emerge” (p. 216).

**Figure 3.1** Integrative Diagram Representing Provisional Categories

The following codes were used for the final coding and analysis (see Figure 3.2 or Appendix F). The codes are formatted by category, concept, property and dimension, and
are placed under corresponding research questions. Categories can be broadly referred to as the themes that emerged from the data. Concepts are words that represent ideas within the data. Properties outline characteristics that describe concepts, and dimensions offer further specificity to variations within properties (Corbin & Strauss, 2008). These codes assisted the researcher in identifying significant statements regarding the essence of the participants’ informal learning experiences (Moustakas, 1994).

To what extent does participation in an informal learning context impact student practice?

I. Interpersonal Relations
   A. Dominant
      1. Student makes decisions.
         a. Decision is music related.
         b. Decision is unrelated to music.
   B. Submissive
      1. Student takes direction.
         a. Decision is music related.
         b. Decision is unrelated to music.
   C. Constructive
      1. Student makes suggestions.
         a. Decision is music related.
         b. Decision is unrelated to music.
      2. Student considers divergent ideas.
         a. Decision is music related.
         b. Decision is unrelated to music.

II. Learning Approach
   A. Before
      1. Student applies concepts learned formally.
   B. After
      1. Student applies concepts learned informally.

III. Skill Level
   A. Advanced
      1. Student with greater skill/ability reacts to the informal learning environment.
         a. Student experiences frustration.
         b. Student teaches peers.
         c. Student learns from peers.
   B. Developing
      1. Student with lesser ability reacts to informal learning environment.
         a. Student experiences frustration.
         b. Student teaches peers.
         c. Student learns from peers.
To what extent does participation in an informal learning context impact student musical achievement?

I. Achievement
   A. Static Achievement
      1. Outcome has been reached before in another music context.
   B. Novel Achievement
      1. Outcome is new to the student, and attributable to informal learning experience.

To what extent does participation in an informal learning context impact student experience in their school ensemble?

I. Musical
   A. Ability
      1. Student uses skills in school ensemble that were learned in informal learning context.

II. Social
   A. Behavior
      1. Student behavior is altered as a result of informal learning experience.
         a. Practice routines are altered.
   B. Attitude
      1. Student attitude is altered as a result of informal learning experience.
         a. Student attitude toward music changes.
         b. Student attitude toward peers changes.
         c. Student attitude toward teacher changes.
      2. Student exhibits enhanced motivation.
         a. Student expresses enjoyment as a result of informal learning experience.

To what extent does participation in an informal learning context impact student self-perception?

I. Ability
   A. Teacher
      1. Teacher indicates a change in their perception of student ability.
   B. Student
      1. Student indicates a change in their perception of their own ability.
         a. Student confidence is enhanced.
         b. Student confidence is diminished.

II. Autonomy
   A. Control
      1. Student feels in control of learning situation within informal learning context.
      2. Student feels a lack of control in informal learning context.

III. Structure
   A. Pressure
      1. Student feels stressed due to a lack of a clear structure and/or clear objectives and/or a clear leader.
      2. Student feels less stress as a result of the lack of a clear structure and/or clear objectives and/or a clear leader.
   B. Accomplishment
      1. Student feels they were able to accomplish more due to the lack of structure provided by a teacher.
      2. Student feels they were not able to accomplish as much as they would have given the structure provided by a teacher.
Validity. Validity establishes whether or not the study actually measures what it is supposed to (Phillips, 2008). The researcher claimed validity in this study through catalytic validity, triangulation, and the conducting of an external audit (Plano Clark & Creswell, 2010). To reduce the chance of researcher bias and provide triangulation, the researcher analyzed data from multiple sources, including audio and video recordings, transcriptions of field notes, transcriptions of participant interviews, and participant journal reflections. The researcher ensured that the findings accurately reflected participants’ perceptions by having an external data auditor corroborate the integrity of the codes (Key, 1997).

Catalytic validity. The researcher chose catalytic validity to ensure that the research led to action (Cohen, Manion, & Morrison, 2003). The researcher questioned whether the research would move the participants to gain a better self-understanding (Denzin & Lincoln, 2005). The data suggests that participants were directly impacted by their informal learning experience, and that participants were aware of their new understandings (Denzin & Lincoln, 2005).

Triangulation of data collection. The researcher analyzed data collected through participant questionnaires, journals, interviews, and observations of audio and video recorded rehearsals to provide triangulation. Creswell and Miller (2000) defined triangulation as “a validity procedure where researchers search for convergence among multiple and different sources of information to form themes or categories in a study” (p.
126). Mathison (1988) asserted that triangulation serves to evaluate and control bias. The researcher collected multiple data sets to moderate any bias revealed through participant responses and add rigor and depth to the inquiry (Denzin & Lincoln, 2005). In particular, the researcher crosschecked interview data with student journal entries, questionnaires, and the researcher’s observations of student participation within rehearsals for consistency and to ensure that what the researcher thought had happened truly happened. When multiple data sources revealed the same thing, the researcher assumed validity.

**External audit.** After data were collected, coded and analyzed, an external auditor checked to confirm the objectivity of the researcher’s conclusions (Plano Clark & Creswell, 2010).
Chapter IV

PRESENTATION OF DATA

The purpose of this research was to understand the perspectives of adolescent music students as they engaged in informal music learning experiences within the context of their school music ensembles. Specifically, the research examined to what extent participation in informal learning contexts impacts student practice, musical achievement, the quality of student experience in their school music ensemble and their self-perceptions. Data were collected from student journals, semi-structured interviews with groups of students, one-on-one semi-structured interviews with teachers, audio and video recordings of student rehearsals and performances, pre- and post-project questionnaires, and field observations by the researcher. In this chapter, data collected from the study’s three instrumental ensembles are presented by category to correspond with the research questions identified in Chapter 1.

All students, as well as the school names, are assigned pseudonyms to protect the identity of the participants. Names are used consistently throughout the chapter to provide rich descriptions of the school settings and the participant interactions (Merriam, 1988). A complete list of all participants and their corresponding schools appears in Appendix G.
Setting

All participants in the study attended public school in the United States. Three teachers from two schools granted the researcher access to their students. Although the schools were located in separate states, the demographics and ability levels, in relation to age, of the students were comparable.

Ashburn Charter School for the Arts

The mission statement for the middle school of Ashburn Charter School for the Arts reads, “to provide a quality education to those who have a desire to explore the creative and performing arts.” Students enrolled in the middle school apply for admission, although there is no tuition. To be accepted, they must pass an assessment from the instructor of the major arts area to which they are applying. At that point, if students have passed their assessment, their names are put into a lottery which determines who will receive an invitation for enrollment. Priority is given to current students, and those students with siblings who attend the institution. Approximately 100 seniors graduate the high school program each year. The middle school and high school programs associated with Ashburn Charter School for the Arts share a campus with the Charter School of Cliff Howard, a nationally recognized college-preparatory math/science high school. The facility is located in an urban city of approximately 70,000 people and is part of the Doc Oswalt School District.

Despite the seemingly intense application process, the atmosphere is decidedly relaxed in the ensembles that participated in the study. There are two instrumental music
teachers at the Ashburn Charter School for the Arts Middle School. Each had students who participated in this study.

Mr. Kalas is the middle school band director at Ashburn Charter School for the Arts. He has been teaching within the Doc Oswalt School District for the past 12 years. Mr. Kalas selected six students, ages 13-14, from his 8th grade concert band to participate in the research project. They were selected because Mr. Kalas knew that they were friends, would be willing to participate, and could be trusted when lacking direct adult supervision. Two of the six students take private lessons on their main instrument, and all were playing their instruments by the 6th grade. The group consisted of three boys and three girls. The students rehearsed during the concert band class time in one of three locations. The most common area was a practice room that adjoined the main rehearsal area. A large window provided visual access to the practice room. The room was not sound proof, and noise from the neighboring middle and high school band rehearsals bled through. The size of the room allowed for the six students to fit inside, but not comfortably if there was a drum set present. The students practiced in the school lobby, an open area outside of the main office and in front of the main entrance to the school, at times when they believed they might be using a piano. The lobby had a baby grand piano available for all students to play. With seats surrounding the piano, the lobby was a common gathering place for students between classes. Lastly, when the band was not rehearsing, the six students could rehearse in the main band room. Chris performed on drum set; John played trumpet and piano; David played the string bass, bass guitar and flute; Tracey performed on trombone; and Jen and Elizabeth played trumpet and clarinet,
respectively. For this study, the students elected to learn *I Want You Back*, by The Jackson 5, on their own, informally, and without intervention from the teacher. They chose the song because it was the first song that they could agree on when shuffling through songs on members’ iPods and phones. After initially listening to the song on a group member’s iPod, the boys in the group taught the girls what to play.

Ms. Manuel is a part-time string instructor at Ashburn School for the Arts. In addition to teaching at the school, she is a full-time graduate student at a nearby university. Ms. Manuel’s entire string orchestra participated in the project. Eighteen students (13 female, 5 male), ages 11-12, split into five groups as follows:

- Group A: Mary (violin), Amy (viola), Jan (violin), and Alicia (viola);
- Group B: Ben (cello), Carlos (violin), Cameron (bass and piano), and Jim (bass);
- Group C: Tanya (violin), Julia (violin), and Maura (violin);
- Group D: Sarah (violin), Erin (violin), and Paul (cello); and
- Group E: Abigail (violin), Rehka (violin), Serena (violin), and Monique (violin).

The students chose their groups. Each group learned their song on their own, informally, and without intervention from the teacher. The original goal was to perform these songs for the students’ winter concert. Based on this goal, students were instructed to select a song that was related to winter holidays, or something that they believed parents and peers would like to hear. Group A chose to perform a Christmas medley that included the songs *Let it Snow* and *Greensleeves*. These songs were chosen because the group members enjoyed the songs and were able to sing them from memory. They learned the songs by singing them, and then playing by ear. Group B chose to learn *The Battle Hymn*
of the Republic. This song was chosen because one member of the group wanted to play it and had previously learned it in private lessons. He was able to convince the other members to choose his song. Students learned how to play The Battle Hymn of the Republic from the student who could already play it. Group C chose to learn Deck the Halls. Group D chose Greensleeves and Group E chose Santa Claus is Coming to Town. Groups C, D, and E chose their songs because the group members were familiar with the melody, could already sing the melody, and enjoyed the melody. Students in these groups learned the songs by singing and then trying to play by ear. At the beginning of the project, the intent was for students to learn these songs aurally from a recording or video without intervention from a teacher. The researcher allowed students to learn their songs informally by singing the melodies to each other, because to introduce a recorded version of the songs would have required teacher intervention that the researcher deemed unnecessary.

Students rehearsed in a variety of settings. At times, all five groups picked a corner of their main rehearsal space to work with each other. This put each group in proximity of about five feet with a neighboring group. Alternatively, one group at a time could be found practicing in the hallway, as students from other classes passed through. One group also chose to rehearse in the stairwell outside of the classroom.

Rollins High School

Located in a city of approximately 25,000 people, Rollins High School is situated just off the city’s Main Street. The school’s mission, as provided on the school website, is “to provide a safe, student-centered environment that promotes life-long learning for all
students and encourages them to progress intellectually, physically, emotionally, and socially.” Rollins High School houses the district’s entire 9th grade, and a portion of the 10th grade. Total enrollment is approximately 850 students.

Upon the commencement of this research project, Ms. Eriksson was entering her second year as a full-time teacher. Her role as the instrumental music teacher at Rollins High School is her first full time teaching job. Seven 9th grade students, ages 14-15, are enrolled in the jazz band class which meets every day during school hours. All participants from Rollins High School were male. They had all been playing their instruments since the 4th grade. Due to the size, friendship, and instrumentation of the group, the students decided that they wished to remain as one group of seven students rather than split into two smaller groups. Joseph, Josh, and Dan played the trumpet and Eric played the alto sax. Zachary performed on bass guitar, and Clark was the percussionist. Trevor played drum set. The song that the students selected to be performed on their winter concert was *Another One Bites the Dust*, by Queen. They selected this song after listening to a variety of other songs on a group member’s iPod. They decided that *Another One Bites the Dust* would be fun and easy to learn. The students rehearsed in the school auditorium, on their own, informally, and without intervention from a teacher. They learned *Another One Bites the Dust* by listening to the original recording on an iPod through external speakers. On stage, chairs were set up for the concert band, so students rehearsed on the floor where they had access to a drum set, amp, whiteboard, and audio playback equipment.
Overview of Participant Groups

Data are presented in relation to the research questions they address. While there were some differences among the sites, the researcher determined that these differences could be related more convincingly to the personalities and skill levels within each particular group rather than the school site. Enough similarities were found among the participants’ experiences that the researcher decided not to separate the data presentation according to the students’ groups.

Student groups are identified by the name of the primary song they worked on during the research project. Before choosing and rehearsing their songs, the researcher met with each group of students on their first day of the project to provide general guidelines for their participation. He told them to select a song or piece of music from the Internet, YouTube, or personal music library that they would like to perform, and that they believed peers and family might like to hear at their winter concert. Unlike the other groups, the string ensemble was told to choose a selection that reflected a winter or holiday theme. In addition, all students were told that they were not allowed to simply download the notation for the song from the Internet, or play from a method book that had a song already notated. Instead, they should listen to the song, or watch a video of a performance, and then arrange a version of the song by ear with the other members of their group. The students were told that their teacher would not provide them with direct instruction, such as the note names or chord names for the songs they were arranging. While the researcher did allow students to write down notes to organize their arrangement, writing down the arrangement was not a requirement of the project.
Another One Bites the Dust. The students of Rollins High School took a generally collaborative approach to learning *Another One Bites the Dust*, by Queen. To create the arrangement, the students listened to the recording and learned the parts together. First, they learned the bass line and then added the melody. Next, they experimented on their instruments to determine if they would add inner parts to the arrangement. Although the students had difficulties with notation at first, they eventually depended solely on listening to the recording to memorize their parts. Dan emerged as the leader of the group and ran the rehearsals. It was also common for the entire group to split into smaller groups of two to three people to work on specific parts. When the group set up to rehearse together, Dan was either in the center, or in front, facing the rest of his peers. When students had questions, or new ideas, they usually addressed them to Dan. For example, when students were interested in learning more about the song’s chords, they asked Dan for help.

Dan’s approach enabled each member to offer ideas and Dan encouraged the group to adopt them. He took time to ask the group’s opinion regarding decisions, checked that everyone understood the directions and concepts being discussed, and made sure that his peers were happy with the arrangement they were creating. Although Dan was the leader, Eric appeared to be a more advanced player, and it was Eric who eventually played the solo melody for their concert.

I Want You Back. Chris and John were the leaders of the 8th grade band students playing *I Want You Back*. These two students, especially Chris, were very vocal in attempting to organize their peers and teach parts. Specifically, they spent the majority of
their time teaching the three girls. In this group, some of the girls were passive and silent at rehearsals and did not make a single suggestion. Clearly, their roles were more submissive. David was also submissive. A highly skilled musician, David could play every person’s part at the end of the first rehearsal. Nevertheless, he did not make suggestions for the group arrangement. Instead, John taught the notes, and Chris ran the rehearsals. It was interesting to observe the procedure Chris employed. First, he would set the tempo, keeping time with his drumsticks, or playing on his drums. Sometimes he would isolate individuals to play their parts alone, but most of the time he had them play along with David. Because David could play the bass line, he was asked to repeat the same few bars of music on his bass until the group could play along with him.

Eventually, John brought a fakebook in to teach other students their parts, but they ended up not really using it. Students were not comfortable transposing the parts for their instruments, and when Tracey, the trombone player, did ask to see the music, John would not let her. Although the original directions stated that they were not allowed to simply read from a method book, the researcher did allow the students to use the fakebook. Even with the book, John, and sometimes Chris or David, told the girls the note names to play on their instruments. John did attempt to read the solo melody part from the fakebook. However, for the final performance David played the melody on flute. There was very little collaboration among the members of the group. Instead teaching occurred through direct instruction as John and Chris decided the parts that others would play, and then taught them those parts by telling them note names, and on occasion modeling how a part should sound through singing or playing.
**Let it Snow.** Jan was the most accomplished of the students within this string group. As a result, the other members of the group looked to her for instruction. She spent a lot of her time teaching peers the parts that she created for them. She would usually fiddle around on her instrument until she found something that worked, and then model the part for her peers. When other students thought they had learned their part, they came and played it for her, and when they could not learn their parts by listening and watching her play, Jan wrote down the notes for them. Although students were active in trying to sing and play their parts on their instruments, much of the learning occurred as a result of direct instruction from Jan.

**The Battle Hymn of the Republic.** This group was split evenly between students who acted as teachers and students who acted as learners. Ben, who has perfect pitch, taught Cameron how to play the song by writing down the notes for him, and then Cameron and Ben spent the majority of their time teaching Jim and Carlos their parts through modeling and writing down note names and notation. Carlos was open to the direct instruction from his peers, and followed their directions. Jim remained largely inactive from the first rehearsal, often not participating with the group at all.

**Deck the Halls.** The 6th grade string students who played *Deck the Halls* spent a lot of time figuring out the melody. First, they sang the melody to themselves and then tried to play the pitches they sang on their violins. If one student learned a part, she played it for the others, and then wrote it down. Once a part was notated, the members of the group used the notated scores to rehearse. For the first few rehearsals the students were able to play the same parts. However, Tanya and Maura soon excelled past Julia,
who remained reliant on the written music for her performance, and were able to play the entire song without the written notation.

**Greensleeves.** The students who learned *Greensleeves* did not depend on music notation for their rehearsals. Instead, they learned by singing and playing the melody for each other. Each student was familiar with the melody of Greensleeves from past experiences. Erin attempted to structure the rehearsals, asking questions to make sure the group understood directions, and listening to other group members’ suggestions.

**Santa Claus is Coming to Town.** This group of girls took a very balanced approach to learning the melody of *Santa Claus is Coming to Town*. They were all very active and engaged in learning how to play the parts. Abigail and Monique transcribed the parts into notation so that they all could rehearse from printed scores. There was no clear leader; rather, the individual members took turns as conductor, and listened to each other’s ideas. Abigail played what she perceived as being a harmony part to the original melody.

**Impact on Student Practice**

This section presents data relating to how participation in an informal learning context impacted student practice. The three categories that classify the data are Interpersonal Relations, Learning Approach, and Skill Level, and relate to Research Question 1: To what extent does participation in an informal learning context impact student practice?

**Interpersonal relations.** The relationships among the members of the groups affected how decisions were approached, and which actions were taken. Students could
be characterized as having a dominant, submissive, or constructive voice within their groups. In other words, students were either making decisions (dominant), or taking directions from a peer (submissive). In certain situations, students considered divergent ideas and made new suggestions (constructive). The researcher viewed the dominant and submissive traits of the students as being polar opposites of a single continuum, with constructive characteristics falling in the middle.

**Dominant vs. submissive characteristics.** From the initial stages of the project, students were casting themselves into roles. It appears that a student’s silence was taken for agreement, or, in many cases, shyness or concessions was interpreted as willing compromise. Simple questions, such as “Why did you choose this music?” or “What changes did you make to the music?” attracted diverse answers that reflected students’ general feelings of contribution to the ensemble. Perhaps the clearest distinction between dominant and submissive students was displayed in Mr. Kalas’ group. Chris and John ran the rehearsals, and were the dominant voices for action. The other group members seemed unable to influence any decisions. It was common for John to drill the girls in the group on their parts, assuming that they could not play correctly; however, there were complaints from other students regarding John’s condescending attitude and Chris’s style of running rehearsals. In a response to a journal prompt, Elizabeth recounted that the song was chosen for their group because “Chris was being bossy.” David, the other boy in the group, who was an excellent musician, also expressed unhappiness toward the general way rehearsals were conducted within the group. At one point during the project, David became so frustrated with the way that Chris was running rehearsals that he asked if he
could remove himself from the group. Submissive students may have felt very little change in their role from the formal experience of their school ensemble, where a teacher gave them direction, to the informal learning context, where peers provided them direction. In both scenarios, submissive students lacked any ownership over the decisions that were made.

The informal learning context enabled dominant students to exercise their voice over the submissive students, with the submissive students often not understanding what they or peers within the group were playing.

The journal prompts provided an insight into the perceptions of the students, even before they began to perform on their instruments. Journal responses from the students at Rollins High School revealed:

Prompt: Why did you choose this music?
Eric: We chose this music because it was voted for. We all liked this song.
Joseph: They chose it when I wasn’t paying attention when they voted.
Trevor: It was the first song we could agree on.
Josh: We have decided as a group it would be a fun song to play, and easy. Because it was unanimous.
Dan: It’s easy and awesome.
Clark: I didn’t. The other band members chose for me.

Certain students, such as Dan, were already able to assert their dominance over the group. Decisions that were made democratically, or constructively, from the perspective of certain students (Eric, Trevor, Josh), were made without consent in the eyes of others (Joseph and Clark).

Students with submissive qualities, such as Jim and Clark, responded to journal prompts with answers of:

Jim: I did not choose this [piece], Cameron did. And so did Ben. I just went along with it.
Clark: I made no changes to the music.
Jim and Clark’s responses contrasted the remarks by the rest of their group members. Ben, a dominant voice in Jim’s group, stated that the music was chosen simply because he “knew the music well.” Ben was able to convince his group members to play the music he liked and could already play.

The rest of the students in Clark’s group referred to the changes that were made to their arrangement using the collective identifier “we.” They were unaware of Clark’s feelings of exclusion. In response to the following journal prompt, Clark’s peers stated:

Prompt: What changes did you make to the music?
Eric: We cut out a part of the song that had random clapping and noises. We did this because the noises were mostly computer generated.
Joseph: We cut out a spot that didn’t have any instruments we could replicate.
Trevor: We cut out the boring part and the part with random noises.
Josh: We took out the part of blankness. It was just empty noise. We cut out the solo because it was silent.

Findings suggest that students who took on submissive roles within a group lacked the social capital to make change despite being discontent with the way rehearsals were handled.

**Constructive characteristics.** Certain groups were able to work very well with one another. At Rollins High School, it was common for Dan to take the lead in making sure that everyone was in agreement. He could be seen asking the opinion of the group before decisions were made, and served as a moderator, fielding suggestions before directions were given. The following is a quote from Dan working with peers during a rehearsal:

Dan: Is everybody good with what we played? Is there any changes that anyone thinks we should make?
A similar role, that of moderator, was taken by other dominant students. Here is an account of Erin as she worked with her peers during a rehearsal:

Erin: Timeout. Timeout. Since there is only two violins and one cello, and there is not enough cello, should we do piano or mezzo? [Looking at Sarah.]

Sarah: [Paul’s] is louder, so if he played mezzo forte and we played forte, we’ll be able to hear him.

Erin: Is that clear? [directed to Paul.]

Paul: Actually, maybe if I play mezzo piano to piano and you play forte to mezzo forte it would sound better.

Erin: Ok. [Continues to talk about how the order of dynamics will go, making sure everyone is clear.]

Erin continued to remain open to other suggestions regarding her own performance. She would often listen to Paul’s suggestions for alternate hand positions and suggestions on how to shift.

When asked during group interviews to reflect on their experience working with peers versus working under their teacher’s supervision, Sarah and Erin responded:

Sarah: . . . when you’re working with your peers they may know a little more than you but you’re more or less on fair ground.

Erin: If you’re playing like just by yourself you don’t know what problems you might have when you think you’re playing it right. But when everybody’s here, they teach you, help you to see, to tell you what you are doing wrong when you think you are doing right.

Julia, a student from another group, also shared her experience working with peers:

Julia: What was similar is that no matter what you have a teacher because like, let’s say Maura knew how to do F# but I thought, I got it mixed up with sharps and flats, she could teach me like a teacher, or Tanya could teach me like a teacher, and Ms. Manuel would teach me that too. How they were different though, is that Ms. Manuel is probably stronger with it because she is older and been through it more probably, and Tanya and Maura might like, you know, know it but not really know it. So that’s different.

It appears that the groups that were able to work collaboratively were also generally more aware, to a student, of the decisions that were being made. Julia and
Erin’s responses allude to an understanding that the collective ability of their peers was greater than what they could achieve alone. Collaborative working environments enabled students to learn from each other and develop arrangements that group members each felt they had a hand in creating. The students’ ability to verbalize the changes made to their arrangement was limited, but it is clear that each of the students in this next group, which worked collaboratively, had some understanding of the changes that were made. In a response to questionnaire prompts, students explained:

Rehka: One of the changes I made was up-bows and down-bows. And my group made a change to repeat the ending.

Abigail: We changed the tune and what strings. There were parts on different strings. We changed because we wanted to protest with different things.

Serena: We changed Abigail to play on the E string instead of the A because it was boring when we were all playing on the A string so we changed it.

Monique: We really didn’t change much. We just had two different strings (keys) that we were going to play.

**Summary of interpersonal relations.** The dominant, submissive, and constructive personality characteristics of the participants defined relationships among the members of the groups and affected how decisions were approached and which actions were taken. These characteristics directly impacted student practice within the collaborative groups. Dominant students were able to direct instruction, while submissive students were mostly unable to assert their voice within the group. When collaborative efforts were present in the groups, and students worked constructively with one another, students were able to learn from one another.

**Learning approach.** The Learning Approach category allowed the researcher to organize concepts regarding the strategies students utilized when rehearsing their arrangements. The researcher questioned whether students applied concepts that they had
learned previously through their formal instruction, or applied new concepts that they learned through their informal experience.

**Applying concepts learned formally.** During the semi-structured interviews, students were asked to reflect on the way they prepared and practiced for the arrangement they worked on for the research project. In some cases, the approach they modeled was learned in their school ensemble experience. In an interview session, students from Rollins High School explained:

Dan: You [his group] played it again and again.
Researcher: Repetition? Playing it again and again?
Josh: Until we got it right.
Jared: We all had to stay in time with each other.

Sarah and Erin described their group’s process:

Sarah: We went through parts of it. So we definitely like, went through parts of it like we do in the ensembles, like [she tries to sing a part of the song] that part.
Erin: [Also sings that part.]
Sarah: Like, the third line or something. We just went through it because we didn’t go from directly from [sings one part] to [sings another part]. We had to like [makes a motion with her hands coming together.]
Researcher: So you broke it apart?
Sarah: Yea, and then we had to put it back together.

The group that performed *Santa Claus is Coming to Town* shared:

Abigail: We, one time, I think we did it like, separately from each other –
Serena: – To see how we sounded.
Abigail: – And then we played it together.
Monique: Yea.
Serena: And Abigail was on a different string.
Abigail: I was on the E string.
Monique: Yea, so she was like up, a violin 2 instead of a violin 1.
Researcher: So that way you were able to figure out how make it all sound tog –
Abigail: – Together.

These examples illustrate students using techniques that are commonplace within formal instrumental ensemble rehearsals. The teachers in this study confirmed that they often isolate problem sections, or have individual sections play their parts to identify
errors. Accordingly, it is important to recognize that in some instances the informal learning context did not impact student practice. Even without a teacher present, students continued to use techniques that had been acquired within their formal learning contexts.

**Applying concepts learned informally.** When asked how they had prepared and practiced for the arrangement they worked on for the research project, students from Rollins High School discussed new approaches that emerged from the informal learning context:

Trevor: I think our approach to [learning the song] was different. Normally we play a lot of songs that we don’t know really that well, but we have the music. So this was kind of different because we knew the song but we didn’t have the music.

Josh: It was like the complete opposite, because with a song we didn’t know, we would go home, and we’d play it and then go home and Google it just to see what it sounds like or something, but this song we do know, so we play it.

Eric: I think we broke it down a lot more into different sections than what we do regularly when doing regular music. Like, with sheet music we would just run through it, go through a couple of sections, but this we really broke down a lot.

Jared: Like, with sheet music, a lot of times, there’s only one or two parts that we really have to work on. The rest, all of us, we can pretty much just run through it really easily. But this one, every little individual part we had to spend a lot of time on.

Important topics for consideration arose through this discussion. First, it can be inferred that the students are generally unfamiliar with the literature that is played in their ensembles. As a result, the students searched for ways of constructing their own meaning, in this case, by searching the Internet. Josh shared that he would Google songs being played in their ensemble just to hear what they sounded like. The discussion highlights that, during this project, students were bringing their own meaning to the arrangement, rather than trying to draw meaning from music that was foreign to them. Josh described the process of learning *Another One Bites the Dust* as being completely opposite from the
way he learns music in the formal ensemble because he already “knew the song.” Eric and Jared also pointed out that they had to spend much more time dissecting the music and learning each part in order to be successful within the informal learning environment. In their formal ensemble, the students were able to just read their own part and be successful. The discussion highlights that students perceived they were taking a more active approach to learning the arrangement in the informal context than they do when involved in the formal context of their school ensemble rehearsals.

Through group interviews, the students who performed Santa Claus is Coming to Town detailed another approach they used to learn the music:

Rehka: We wrote our own notes.
Serena: Well, we had our own music so we could practice at night.
Rehka: But that is something different than what we do in orchestra.
Abigail: Yea.
Monique: Yea.
Rehka: Something the same that we did?
Researcher: So, did you sing the song and then write it down?
Everyone: [Smiles and says yes.]
Abigail: Yea, we sang it.
Rehka: It was cool.

In this case, students still felt dependent on notation so that they would be able to practice and perfect their performance. However, the step students had to take in order to have notation was new. They had to transcribe what they heard, what they were singing, in a meaningful way so that they could make sense of it when practicing at an alternate location. This process of singing and playing, and having to write down the notation to perform, was common among the participants, and was a result of their participation within the informal learning context.

Many of the groups depended on modeling to teach and learn from each other. Since students did not have a shared vocabulary that might enable them to accurately
explain what they were doing, simply playing the parts was more accessible. When students lacked the same technical vocabulary or wished to explore new techniques on their instruments, modeling was necessary.

**Summary of student learning approaches.** It was not uncommon to find students utilizing rehearsal techniques that they had adopted from their formal ensemble rehearsals. The processes of rehearsing sections of the arrangement, repetition, and isolating specific parts were learned from their teachers. However, the process of teaching each other parts by rote and through modeling emerged from their participation within the informal learning context, and trying to transcribe these parts offered new challenges to students. While not all students required notation to be successful, every group attempted to write down what they were playing at some point during the course of the project.

**Skill level.** The students’ skill levels also influenced their experience within the informal learning context. Depending on students’ skill sets, they could be categorized as being advanced, (having greater ability), or developing, (having less ability). In both of these cases, advanced students and developing students were categorized in relation to the typical ability level of the participants within their groups. Data were analyzed to see how students of varying abilities encountered frustrations, and taught and learned from peers.

**Advanced students experiencing frustration.** Certain groups did encounter significant frustrations during their rehearsals. Interestingly, the groups that had the most difficulty were the groups that had the greatest range in ability among the participants.
Many of the students who were much more skilled than their peers appeared to have a negative experience during the project. After asking a group of students from the string ensemble if they enjoyed any particular parts of the project more than others, students responded as follows:

Ben: [Shakes his head no.] I hated it. I didn’t like most of the group working because we were not very together.
Researcher: Not very together?
Ben: Not at all.
Researcher: Do you guys agree with that?
Carlos: Yes.

Other advanced students encountered similar frustrations with the learning pace of their peers. After learning his part the first day, David, the bass player for the 8th grade band students, was constantly looking for ways of keeping himself busy as the rest of the group worked on their parts. His constant playing of other songs caused his group to unplug him from the amp during one rehearsal. Looking for something to do, he also learned the entire melody of the song on flute before any of his peers were able to get past the intro. Comments during rehearsals, such as, “I’m bored dude,” and “Shouldn’t we be done by now,” summarize his basic feeling about the project. There was nothing challenging for him to learn, with the exception of patience.

Teachers also noticed and confirmed the frustrations of the more advanced students. In an interview, Ms. Manuel described one group in particular where she noticed that an advanced student was becoming frustrated with her peers. She said:

There were some kids that were at a higher level, that I thought would be really great, but they did not like having all of that freedom. So, I know in the group of Sarah, Erin, and Paul – I consider Erin a really great 6th grader, 6th grade player, and she would just get very frustrated that the three of them were seeing differently and not seeing eye to eye. (Manuel interview)
Advanced students teaching peers. The students who were at a more advanced level of playing were often the individuals who were expected by peers to provide guidance. These students did make attempts to teach their peers. Yet, despite their advanced ability, advanced students did not necessarily have the skill set to be effective teachers.

In some cases, the advanced students seemed to become burdened by the time that they had to spend teaching peers. For advanced students, playing the parts was not difficult. These students perceived that teaching others was the biggest imposition on their time. An audio recording of a group’s rehearsal reveals the following dialogue from Cameron, directed toward Jim:

Cameron: You know, I’m trying to help you so that you can play better . . . Come on man, you gotta at least try . . . Trust me, if you try you can learn, and once you get good at it, it’s fun.

Advanced students learning from peers. The data suggests that the only times that advanced students did learn new things from peers was when they were learning from other advanced peers. One example was how Cameron learned The Battle Hymn of the Republic:

Researcher: How did you originally learn it, did you have a recording?  
Cameron: Ummm –  
Ben: I told him.  
Cameron: He [Ben] told me the notes and the chords.  
Researcher: How did you know it? [Directed to Ben.]  
Ben: I heard it before.  
Cameron: Private orchestra?  
Ben: I heard it before and I played it before in my private lessons.

Erin, who was an advanced student, was also able to learn from Paul, who was a little more experienced. As a result of their experience in an informal learning context, advanced students were put into a role of having to teach their peers, which they
perceived as different from their experience within formal music ensembles. Students with lesser abilities, conceptualized within the coding scheme as developing students, also experienced frustration and learned from peers. In fact, these students, who were able to learn from more advanced peers, seemed to benefit more from the informal learning experience than the advanced students.

**Developing students experiencing frustration.** Developing students experienced frustration for different reasons than the advanced students. One reason that was observable was that they simply could not keep up with the pace of their peers.

Developing students also became frustrated with the unclear instruction that they were receiving from peers. Amy expressed such frustration in a rehearsal where Jan claimed she was quitting. At one point Amy exclaimed in a perturbed manner:

Amy: So exactly what are we doing?!

**Developing students learning from peers.** In an interview, Ms. Manuel discussed how some of her students were benefiting from working with more advanced students:

. . . both Carlos and Rehka, music aptitude-wise, are pretty average. So the fact that they really excelled – Carlos was in Ben’s group, and I think having Ben and Cameron push him was really great. And, I think Rehka was one of the higher achievers in her group. (Manuel interview)

Ms. Manuel described Rehka as being “not the best player, but she really, they really worked hard on [the arrangement].” Rehka’s group was able to work effectively together despite the initial range in ability.

**Summary of skill level findings.** Advanced students did tend to become frustrated with their peers’ learning pace. Whereas in a formal learning context, the responsibility for the developing students was placed on the teacher, developing students looked to
advanced students for help within the informal learning context. It was more common to find developing students benefiting from their experience with the advanced students than advanced students learning from developing students. Thus, participation within the informal learning context had a greater impact on the practice of the developing students, who were able to learn new skills and techniques from peers. It was clear that at this age level, students might have a difficult time teaching music to each other, especially if the performance of music comes to them naturally. In terms of student perception, advanced students may not be able to define a sequential process that they took for others to follow in order to be successful. As a result, the advanced students placed an emphasis on modeling and writing down notes as a teaching tool within the informal learning context.

**Student practice findings.** Students who were more submissive did not feel that they were able to affect change in the way the rehearsals were run. Developing students realized that they could learn from more advanced peers, and the advanced peers at times felt burdened by the responsibilities of having to teach lesser skilled group members. The informal learning context also provided a platform for advanced students to learn from each other. Dominant students felt responsible for the group’s progress. As a group, students attempted to use the techniques that were learned from their formal music ensembles. Initially, students felt they had to have sheet music, which served as the catalyst for students to learn songs by ear and transcribe what they were singing and playing. As a result, students realized that a new set of skills began to emerge.

Participation in an informal learning context impacted student practice in that it enabled
students with constructive personalities to work collaboratively and learn from each other.

Impact on Student Musical Achievement

The data presented by the researcher in this section relate to Research Question 2: To what extent does participation in an informal learning context impact student musical achievement? Student achievements were defined as being static, recognizing that similar outcomes had been reached through their formal training, or novel, meaning that the outcome was new for the student and could be attributed to their engagement in the informal learning context.

Static achievement. During group interviews, the researcher asked the students what they felt they had learned during the project. Some of the achievements were not a result of the informal learning experience. They were the consequence of students using skills that they already possessed. In an interview, David shared:

David: We learned sight reading, so whenever you hear it you can play it right a way, like right off the bat.

From a conversation that the researcher had with David in a hallway at his school, it was made clear that playing by ear, which David referred to as sight reading, was a skill that he had already developed. During the project, he was given the opportunity to further cultivate that skill.

Some students believed that playing the song chosen by their group was their sole accomplishment. Cameron responded:

Researcher: So, did you think you were actually able to learn anything?
Cameron: A new song, that’s about it.
When relating what they had learned in their rehearsals, the most common non-musical achievement that permeated the student interview sessions was overcoming the challenge of working together. Working together was not a new concept for students. Students are asked to work together for projects all of the time in school settings. However, according to students, working with peers when engaged in the informal learning context was still a challenge. Accounts from three groups in Ms. Manuel’s ensemble revealed:

Researcher: . . . during the rehearsals, what, if anything, did you learn?
Alicia: To work together.
Jan: It’s hard to work with a team.
Maura: I thought we really learned, like, how to work together. Cus, at some points we had like, different suggestions, and we had to work together more to find out what was the correct answer.
Monique: How to work as a team.
Abigail: Yea.
Monique: How to deal with the teacher not being around maybe.
Abigail: And to learn new music and things, you know.
Serena: We learned how to work together better.
Rehka: Yea.
Abigail: Like, towards the end we weren’t arguing as much.

The value of learning how to work with others was also present in student journal responses. The following responses to a journal prompt are from students in four separate groups:

Prompt: What did you learn during this project?
Joseph: Teamwork.
Alicia: How to work together with people in my group.
Ben: Working as an ensemble.
Rehka: I learned to work together and teamwork.

Students related these interpersonal skills of working together as being more difficult to overcome than the music itself, although the music often served as the catalyst for argumentation. Interviews with students revealed that groups often argued over what
songs should be played, dynamics, what the correct notes and fingerings were, what key they should play in, and other technical aspects such as bowing decisions.

**Novel achievement.** Students shared their achievements, some of which were new as a result of their experience in the informal learning context, through group interviews:

David: We don’t really need music when we’re listening to it. We don’t need to read it, we just play it.

Based on the context of the interview, the researcher inferred that David was speaking broadly about his peers in this comment. The statement implied that the perception that music was needed for the group to perform together had been changed.

For students in the string orchestra, their participation within the informal learning context had a large impact on their perceived ability to play by ear. The students from Rollins High School shared that through the informal learning context, previously introduced concepts gained new meaning:

Josh: We learned how to unify, and work as a team, and play together as seven kids – or not seven kids, one jazz band [laughing].

Trevor: I guess we worked on our listening skills a lot to try and figure out what they were doing since we didn’t have the music and stuff.

Eric: I was thinking mostly to transpose – we learned how to do that, and the key differences between instruments.

The students’ creation of an arrangement by ear was a new and exciting achievement that evolved from their participation within the informal learning context.

Ms. Eriksson explained:

I think that now, after doing the project, they tend to listen to each other a little bit more, like as a group, instead of just worrying about what their part is. ‘Cus if I asked them about what another part was doing – whereas before they would’ve been like, “I didn’t even hear what he is doing” – but know they are kind of getting the whole group dynamic thing where the bass does this – that’s their job, and the drummers do this, and that’s their job, so I think they are starting to listen to each other more. (Eriksson interview)
When asked what she thought the students’ enhanced listening resulted from, Ms. Eriksson responded:

I think it’s because they had to try and help figure out each other’s parts. Because they weren’t just focusing on their part and the music wasn’t right there, they were trying to help each other out. They know now that there is more levels to what is going on in band. It’s not just their part and their notes, it’s all of it fitting together. (Eriksson interview)

Ms. Manuel also believed that Rehka became more vocal as a result of the project and improved in her playing technique.

**Musical achievement findings.** The skills that students reported having learned through this experience can be broken into three areas. The first centers on their interpersonal skills. Students perceived working together to be a challenge that each group had to overcome. Many participants mentioned that enhanced collaborative skills resulted from their experience. Second, there were achievements that were technically and theoretically based. Students believed that they gained a better understanding of instrument transposition, articulations, and form. Lastly, when asked what they had learned, many of the students reported that they believed that they learned how to play by ear. This refers to a change in their learning approach, which was highlighted previously when discussing how participation in an informal learning context impacted student practice. Learning how to play by ear also had a positive impact on the students’ ability to achieve success in performing and constructing their own arrangements.

**Impact on Experience in School Ensemble**

In this section, the researcher presents data relating to Research Question 3: To what extent does participation in an informal learning context impact student experience in their school ensemble? Data were categorized according to musical and social
concepts. If the data were categorized as Musical, then data revealed that a student was using a skill in their school ensemble that was learned through their informal learning experience. Data categorized as Social refer to an impact to a student’s behavior or attitude. When determining behavioral changes, the researcher looked for whether practice routines outside of school were altered. Changes in attitude reflected changes that students felt toward the music, peers, or the teacher. Additionally, students may have exhibited enhanced motivation, characterized by expressions of enjoying the project, and spending time outside of school working on their arrangement.

**Musical.** This category of data specifically refers to the perception students had relative to their abilities. The skills that students believed could be transferred into their school band setting included enhanced aural skills, or being able to play by ear. Specifically, students commented on the idea of being able to understand what the music was supposed to sound like. Students also thought that their newfound ability to work more effectively with peers would benefit them in their school ensemble.

**Summary of musical findings.** Students believed that their ability to (a) play music by ear; (b) understand what the music was supposed to sound like before playing it; and (c) work effectively within a group would enhance their performance in their school ensembles. Students believed that they acquired these skills as a consequence of their experiences within an informal learning context.

**Social.** The data classified within this category are characterized by changes in student behavior and attitude.
**Behavior.** In certain cases, student behavior was altered as a result of the informal learning experience. Most commonly, these changes were evidenced through a change to a student’s practice routine. Reflections to a journal prompt that asked whether students believed they had altered their practicing as a result of their participation in the research project revealed:

Amy: I’ve changed in practicing by practicing by ear and learning classic pieces.
Mary: Yes it has. I listen more to my sounds and I remember the notes.
Julia: Yes I have changed the way I practice because I used to only practice once a week. But now I practice 2 or 3 times.
Maura: Yes, I do think I change[d] the way I practice. Now I practice differently by practicing each piece of music more. When I practice a certain part I play the part slower than it’s played and sometimes just finger the notes.
Erin: I did change the way I practice by playing my scales of the music I play . . . The only way I changed the way I play my instrument is playing the scale of the music I am playing. I think I am playing much better ever since I did Mr. Bersh’s project. I feel much harsh on myself when I am playing a song. For example, if I try to [memorize] a song and I play a few notes wrong, I would start the whole song over.
Rehka: I have changed a little bit by playing some scales and listening to my intonation. I have also been clapping and singing some notes that I don’t understand.

As a result of their experience in the informal learning context, students recognized that they changed the way they practiced for their school ensembles.

**Attitude.** The researcher looked for whether students recognized a change in attitude toward music, their peers, or their teacher. As a result of their participation in an informal learning context, some students’ attitudes toward the value of having a teacher changed. Students from each site indicated that after the project they came to value the role a teacher can play. Data revealed that students would rather perform and learn music without the interference of a teacher, but recognized their lack of success without one.
For some students, being placed with peers enabled them to become more self-aware of their own talents. Their participation within the informal learning context enabled them to realize their advanced ability.

Students also noticed that they had better relations with other members of their school ensemble through their engagement in the informal learning environment. Curiously, in Mr. Kalas’ ensemble, students’ achievements did not change, but band members’ perceptions of the participating members’ abilities in relation to their peers did. At Ashburn Charter School, students from Mr. Kalas’ ensemble involved in the research project were seen as leaders within the school ensemble. It is unclear whether their perceived leadership was the result of the informal learning experience itself, or simply the fact that they had been separated from their peers.

Data were also examined to see if students perceived changes in motivation as a result of their experience in the informal learning context. Certain students exhibited expressions of enjoyment that resulted from participation in the informal learning context. Other students were also motivated to spend personal time at home working on the arrangement. In the beginning of one rehearsal, Josh can be seen excitedly telling Dan about something that he figured out when listening to the song at home. Josh told Dan that he was going to text him about it, but was not exactly sure how to explain what he had heard.

**Summary of social findings.** As a result of their experience with the research project, students gained a greater appreciation for the role their teachers play in
organizing their ensemble experience, and also learned more about their peers. Whether it was gaining a greater understanding of their ability levels in comparison with others, or gaining confidence in their ability, student attitudes changed. Additionally, student practice behaviors changed as they became more motivated in their ensembles. Students practiced longer and in different ways. The most notable change to student practice behaviors included playing songs by ear.

**Students’ school ensemble experience findings.** As a result of their experience in the informal learning context of their groups, students’ experience in their school ensembles was altered musically and socially. Students found that approaches they developed in their informal learning experience, such as playing by ear, utilizing their enhanced aural skills, and working together, could benefit them in their school ensembles. Furthermore, student attitudes toward music, teachers, and peers were altered.

**Impact on Student Self-Perception**

In this section, the researcher presents data relating to Research Question 4: To what extent does participation in an informal learning context impact student self-perception? Data categorized under Ability focused on whether there were indications from students that their perceptions of their ability changed. The category Autonomy refers to the amount of control that students believed they had during the informal learning project, and the category Structure reveals accounts of how students perceived the organization of the informal learning environment. Specifically, stress levels varied in accordance with student perceptions of whether there existed clear structure, objectives,
or leaders. Students had varying reactions to whether or not they would have accomplished more or less with a teacher present to direct learning.

**Perception of student ability.** For many students from the string orchestra, it seemed apparent that upon initiating the project, they were not confident that they could perform without the music being given to them.

Initially, some students were surprised that they could play without the sheet music and recognized their growing ability to learn music by ear. Journal responses show that students’ confidence levels were enhanced as they reflected on what they had learned through the informal learning experience. Students recited that their technique improved, their understanding of notes and rhythms improved, and that they were able to learn without a teacher. Students claimed that they had become better players, and were able to achieve more on their own.

**Student ability findings.** Students reported enhancements to their levels of confidence, stating that their experience playing with groups in an informal learning context made them realize they could play harder songs, figure out songs by themselves, and generally achieve at a higher level. Additionally, a teacher shared that observing her students in an informal learning context changed her perceptions of what they knew and were capable of musically.

**Perception of student autonomy.** In this section, the researcher presents data on students’ perceptions of control over the informal learning context. The direction of rehearsals tended to flow based on whatever sparked the interest of the participants at any
point in time. The lack of group focus contributed to a lack of feeling in control over the
situation. During a group interview, Mr. Kalas’ students revealed:

Jen: It was really hard to work together. We would just lose focus.
Chris: It’s like, I get this a lot too sometimes when I’m working on something I
don’t know that well. I just don’t want to play it and I want to play other
stuff, like someone could be showing me a song on guitar or drums and I’ll
just be like, “no,” and I’ll play something else. It gets you really sidetracked
and it means you can’t get as far on the piece that you’re doing.

Researcher: Compare your approach to practicing and preparing for music that you do in
an ensemble versus how you practiced and prepared for this project.
Chris: I found that when we were in here – like when we’re in band, like at a
rehearsal, kids will goof around and stuff and Mr. Kalas will just ignore
them, but it’s a lot harder for me to ignore them, cuz I’m a pain in the butt.
And whenever David or John went off on something I just got really mad
and it seemed like we didn’t get anything done – in certain times over other
times when I was more calm about stuff.

Chris and Jen expressed the difficulty that they had working together with peers.
They made it seem as if, despite wanting to stay on track, it was inevitable that the group
would lose focus.

On the other hand, some students felt an increased feeling of control over the
situation because they, not the teacher, were in charge of making the decisions. When
asked during group interviews how they felt about working in collaborative groups,
without the teacher, students from the string ensemble responded that they enjoyed
making their own choices about the music they played and liked that they did not have to
listen to a teacher or be “bossed around.” Students also felt they were able to put their
own “flair” into their arrangements, and noted that, as Julia commented:

Julia: The most valuable part was that we did it by ourselves.

Enabling students to have ownerships over their arrangements provided
them with an enhanced sense of control.
**Autonomy findings.** There were participants who felt a lack of control over their situation due to the informal nature of the learning environment. However, more students identified positively with the opportunity to make their own choices, and interact with peers absent the external controls of a teacher. As a result of their experience in the informal learning context, many students perceived that they were able to make their own choices and exercise more control over their rehearsals.

**Perception of structure.** Students involved in formal music ensembles are used to having a certain structure organize their rehearsals. Given the nature of informal learning environments, there may be a lack of clear structure, clear objectives, or even a clear leader within a rehearsal period. As a result, many of the students’ responses to the journal prompts could be characterized as reflecting their perceptions of the structure of the informal environment. There was not a single group that had a unanimous positive or negative reaction to making music with peers when lacking formal guidance by a teacher.

The journal responses from the students at Rollins High School accurately depicted the conflicting feelings of the other groups involved in the project. In some cases, student responses from Rollins High School that were given within the first month of the project contrast the responses they provided in the last month:

| Prompt: Do you like not having a teacher? Why? |
| Eric: I didn’t like not having a teacher because we have no one to direct the activity. No. It was really hard to learn. |
| Joseph: Yes, there was no nagging. There was no strict plan. |
| Trevor: No, people get too chaotic. |
| Josh: Yes, I enjoyed being without a teacher. So much freedom. [Then, in a later response] Having a teacher is an advantage. I wish we had a conductor. |
| Dan: No... everybody was playing around [Then, in a later response] Yes. Less nagging. |
Clark: Not really, because I felt that no one really knew what they were doing. [Then, in a later response] A little because we managed better (eventually).

**Pressure.** For some students, the lack of structure contributed to feelings of stress, while for others, the experience became less stressful. Journal responses shared previously from certain students at Rollins High school illustrate an appreciation of a lack of structure. When asked if they liked not having a teacher, students responded that they enjoyed being without the teacher, not having to abide by a strict plan, and not having to listen to any “nagging.”

Students from other groups also expressed positive reactions to the lack of a formal instructor or structure to their rehearsals. These feelings were affirmed through group interviews. Multiple students acknowledged that they enjoyed being able to learn at their own pace. Additionally, as a result of the lack of accountability from an authority figure, students perceived the informal learning experience as less stressful than their school ensembles.

Students also found the lack of structure present within their informal learning environments to be a source of conflict. Based on student responses, it appears that some students perceived the informal learning experience to be more confrontational than their school ensemble environment.

**Accomplishment.** Many students felt that if a teacher had structured rehearsals, they would have been able to accomplish more. Ms. Manuel related that she could see that the lack of structure was negatively impacting the performance of some of her students.
Students perceived that, within the informal learning context, they did not practice as hard as they did within the school ensembles, they were not able to stay on track, and they were not able to effectively mediate their own decision-making. Cameron and Carlos’ journal reflections also suggest they felt they would have been more successful with a teacher and formalized structure.

**Structure findings.** Students had differing reactions to the lack of structure and formal guidance provided by a teacher in the informal learning context. Some students felt that it was less stressful when they were provided the opportunity to work at their own pace with a lack of accountability by an authority figure. Others believed that the lack of a teacher presence led to more arguments. An indicator of how argumentative a group was can be related to whether or not that group was composed of friends.

Students also made a relationship between the lack of structure and their ability to accomplish tasks within the informal learning context. With the exception of one student, participants expressed that without a teacher to provide a more formalized structure, they were not as successful as they could have been.

**Findings relating to student self-perception.** Many students reported that their confidence was enhanced through their participation in the informal learning environment. Students perceived that their ability to play harder songs and figure out songs independently could be attributed to their experience in the research project. There were conflicting views of autonomy within the groups. Some participants felt a lack of control over the learning environment due to the informal nature of the project. A greater number of students identified positively to the lack of external controls, which enabled
them to make their own choices regarding their music. Despite positive reactions to enhanced feelings of autonomy within the informal learning context, the majority of students believed that due to the lack of structure that was present without a teacher, they did not accomplish as much as they could have with a teacher’s instruction. It was common for students to find themselves off task, and more common for groups of students who were not true friends to be argumentative.
Chapter V

CONCLUSIONS AND RECOMMENDATIONS

This study investigated informal learning experiences from the perspective of adolescent students enrolled in formal school music ensembles. The researcher applied a phenomenological research methodology to study participants from three music ensembles located within two public school institutions. Students from these ensembles were responsible for creating their own arrangements of self-selected music within peer groups, without the direct instruction of a teacher. To frame this study, the researcher examined the literature underpinning contemporary understandings of informal learning contexts as described by Green (2002, 2006, 2008a). This generated four research questions for the study. The researcher utilized a social constructivist lens to analyze and interpret the data (Corbin & Strauss, 2008).

Discussion

Question 1

First, the researcher asked: To what extent does participation in an informal learning context impact student practice? In Chapter 1, the researcher defined practice as “ways in which students rehearsed music materials within informal learning contexts.” Data revealed that because of the informal learning experience, students perceived an impact to their practice. Students realized that they could no longer sit back and expect to
receive definitive direction from an authority figure. In most cases, students acknowledged that they needed the help of their peers to be successful in performance. This awareness existed most strongly for those students who were active contributors and participators within the informal learning environment. This finding is also consistent with the tenets of social constructivism, which served as the theoretical framework for this study.

Georgii-Hemming and Westvall (2010) claimed that, within informal learning contexts, dominant students are able to take control of content and design while quiet students remain quiet, and students lacking instrumental experience hold back from even trying. Heuser and Thompson (2010) stated that the absence of guidance within an informal learning context could lead to performance problems such as inefficient technique, plateaus in learning, frustration, and disillusion. The researcher found similar outcomes in the present study. In contrast to their formal ensemble experiences, dominant and advanced students felt a responsibility to teach their peers parts, and were placed in a position to make decisions concerning the direction of the rehearsals. Developing students often felt dependent on more advanced peers for instruction, and submissive students felt unable to alter or affect decisions made in rehearsals. During interviews, groups expressed that they reached plateaus in their learning throughout the course of the research project.

Students’ participation in informal learning contexts also impacted the approaches taken toward learning their arrangements. Students felt that the process of working together without a teacher presented novel challenges distinct from working with a
teacher and believed that they were required to take new approaches to learn the music, which most notably included learning by ear and modeling performance for each other. Researchers (Allsup, 2003; Wiggins, 2000) claimed that the collaborative efforts of students resulted in the formation of a combined group expertise that often surpassed the capabilities of any singular member. When working together in groups, students in this study were able to learn from each other and make meaning of the music they were learning. Even submissive students made significant contributions, if only by participating in the group and then participating in the performance.

The utilization of an iPod made an impact on student perception. Again, consistent with social constructivism, students were able to glean meaning when they used an iPod to listen to the music they were to arrange. Using the iPod, students could all react and listen to the music together, rather than having to depend on one member to teach, simply because that student knew the song better than the others. Students could also hear what each other’s parts should sound like, rather than only being privy to the notes that were on their page. Although students had a difficult time arranging the music in a way that accurately reflected the abilities of each of the members, using recordings led to collective efforts to figure out parts. Such engagements, when group members worked together, were catalysts for changes in perception.

**Question 2**

Second, the researcher asked: To what extent does participation in an informal learning context impact student musical achievement? The researcher was interested in
whether and how students perceived their own musical achievements as a consequence of the informal learning experience.

Renwick and McPherson (2002) stated that when students are allowed to practice music they have selected and find personally interesting, an increased use of cognitive and metacognitive strategies typical of expert’s practice can occur, leading to more effective learning. The strategies that Renwick and McPherson addressed, such as humming, silent fingering and analysis, adjustment of tempo, and repetition of larger sections of the music, were present in the informal learning environments of the current study.

Green (2008a) described another catalyst for the development of enhanced practice strategies. Green defined group cooperation as including learning that occurs more or less unconsciously or even accidently, simply through the collective actions of a group. This includes the implicit learning that transpires through music-making and watching, listening to and imitating each other. However, Mornell (2009) stated that knowledge could be acquired through watching someone else only as long as an individual had experience related to the activity being observed. It did appear that, even though all students in the study were members of a formal music ensemble, less skilled students may not have possessed the technical facility or audiation skills to learn by simply watching, listening to, or imitating peers.

Rogoff (1990) asserted that social guidance provided children with opportunities to participate beyond their own abilities and internalize socially practiced activities, which in turn advanced their potential for independently managing problem solving. The
key word in that statement is guidance. Guidance assumes assistance or support, and in many cases, the one-dimensional assistance that students were able to offer, such as modeling parts for each other, was not enough to ensure that students were learning.

In this study, the researcher found that, as a result of their experiences within formal music ensembles, students possessed a nominal understanding of some theoretical aspects of music, such as form, articulations, and transposition. Students recognized terms, but could not necessarily demonstrate the meaning of those terms through performance. Music notation presented particularly interesting challenges within the groups. Students recognized that early in the study. Specifically, students realized that they had a very difficult time manipulating theoretical music concepts in new contexts such as transcribing popular melodies with peers and using notation as a means of communication to teach parts. Students perceived a need to use music notation in order to feel successful. While some groups were able to eventually look past the process of writing down the notes they played, at one time or another, notation limited the scope of each group’s performance. Students also cited the lack of notation as a reason for being unable to rehearse sections of music effectively. If a part could not be written down, then it might not be played. It is possible that this was because notation was the common language that students believed they could all understand.

Some students were able to engage in experiences that strengthened their emerging musical understandings and they developed a working vocabulary of practical skills that enabled effective communication within their group. Students worked together to understand transposition, how to perform using different articulations, and learned to
incorporate new instrumental techniques. These students were actively involved in the making and performance of their arrangements. They were proud of this. Serena and Julia explained:

Serena: Yes, I have changed. Now I’m in strings honors. I think [my experience in the informal learning context] helped to get in honors.
Julia: The most valuable part was that we did it by ourselves.

Ms. Manuel also noted improvement in Carlos:

So I’ve noticed a big improvement with [Carlos]. He’s probably going to be good enough to be in our Honors Orchestra, and I would not have said that earlier on in the year. (Manuel interview)

From the perspective of many of the students, the informal learning context presented an opportunity to practice playing by ear – a skill that had not received much attention in the past. Progress was slower within the informal learning environment and the amount of material performed was less. However, for the students who saw this activity as a challenge and were able to accomplish playing music in a way that they perceived was new for them, the playing that was accomplished was very meaningful. Students gained a greater understanding of musical elements, such as dynamics, tempo, and articulation, that they addressed within the informal learning context, bringing new meaning to these terms that had been introduced to them through their formal ensemble experiences.

The number one achievement noted by teachers in Green’s study (2008a) was enhanced listening skills. Ms. Eriksson, of the current study, also made special mention of her student’s enhanced listening skills and musical understanding. She said:

...they were saying things that I never heard them say, that I would say in class, but I didn’t know if they were actually getting – you know, dynamics, counts, transposition (which they were trying to figure out, and they at least knew that, “Oh, my instrument is in C and yours is in Bb so we have to do this to fix it.” Even though at first they didn’t
really get it, they tried to understand it). They knew more musical elements than I thought. They listened better than I thought they did, because they talk a lot, but when they listened to the recording they were really listening. (Eriksson interview)

Additionally, student journal and interview responses support that they perceived that their listening skills had improved as a result of their informal learning experience. For example, Trevor reflected:

Trevor: I guess we worked on our listening skills a lot to try and figure out what they [Queen] were doing since we didn’t have the music and stuff.

Beyond the music, an achievement that was necessary for the peer groups’ success was being able to work together and effectively communicate. This was important to the theoretical framework of the research. The lack of a teacher figure placed students in a position of having to work together, overcome differences, and assert their own learning goals and objectives. Students were required to take responsibility for their own and their peers’ learning. As a result, accomplishments were more personal, and more significant on an individual basis. Similar to participants in Wiggins’ (2000) research, students had to accommodate others’ viewpoints, explain their own ideas, and collaborate with peers to be successful.

Question 3

Third, the researcher asked: To what extent does participation in an informal learning context impact student experience in their school ensemble? The researcher was interested in whether students understood that they would be able to transfer musical skills and meaning from their informal experience to the formal ensemble context. The researcher looked at social and musical changes. Students indicated that approaches they developed in their informal learning experience, such as playing by ear, utilizing their
enhanced aural skills, and working together, could benefit them in their school ensembles. For example, Tracey and Rehka shared:

Prompt: Could you use what you learned in your ensemble rehearsals?
Rehka: Yes I could be helping others that don't understand.
Tracey: If you listen to your music, it might be easier to play if you knew what it was supposed to sound like.

For some of the younger students, making any type of transfer from the informal context to the formal context of their school ensemble was difficult. The students’ inability to transfer skills or content knowledge from one context to another could be attributed to their age. Especially for 6th grade students, Regelski (2004) reported that developmentally logical thinking is essentially limited to events and concepts in the here and now. Adolescent students may have difficulty conceptualizing ideas abstractly, such as taking a skill learned in an informal context and applying it within a formal context. This would explain why some students did not feel that skills would transfer because key signatures might not match between the songs they were playing, or because they simply were not playing the same song in their formal ensemble. Lehmann, Sloboda, and Woody (2007) asserted that unless students are involved in decision making while preparing for performance, very little transfer of learning will occur from one situation to the next. Their statement supports the researcher’s findings that, based on journal and interview responses, those students who took submissive roles within the informal learning context did not learn as much as those who were actively involved.

Student attitudes toward their teachers, peers, and music were also altered. After successfully playing a section of music by ear, Rehka exclaimed:

Rehka: [Finishes a run through of the melody] Oh my God. I remember when I hated playing the violin, and now look at me!
The data suggest that the majority of the students developed a greater appreciation for the role that a teacher has in structuring their music learning experiences:

Prompt: What did you learn during this project?
Tracey: I learned that teachers are very helpful in keeping you on task.

Researchers (Abrahams, 2010; Feichas, 2010; Green, 2006; Jaffurs, 2004; Lamont et al., 2002; Seifried, 2006) found that students were more motivated to participate in school music when instruction occurred in an informal music context, allowing for autonomy among student learners. The current study supports the notion that students were motivated to create an arrangement they were proud of, and enjoyed the opportunity to work together without the direct oversight of a teacher.

Students in Green’s study (2008a) reported that traditional approaches to instruction were less enjoyable because they involved receiving instructions from teachers. Students attributed an enhanced sense of personal responsibility and an ability to recognize how to improve their own learning to their increased autonomy. Students in Green’s (2008a) study also indicated that the autonomous learning experience was more satisfying than teacher-directed learning and had a positive impact on self-confidence. Students in the current study did report enhanced self-confidence, satisfaction in making their own musical choices, and enhanced meaning when generating their own success. However, these students, as members of formal music ensembles, were also used to a certain level of proficiency and success with their performance, and it was evident that they were aware that their final products would have sounded better if they had been provided more teacher direction and input. This was particularly evident with the groups that performed I Want You Back and The Battle Hymn of the Republic. Consequently,
based on the responses of some students, they may have found the experience more enjoyable if they had been given more teacher instruction.

Teachers noticed an impact to their students’ participation in the school ensemble. Ms. Eriksson commented that she believed her students had a better understanding of the role each instrument played with the ensemble, and Mr. Kalas noted that peers saw the six students that were involved in the informal learning experience as leaders in the school band ensemble. Ms. Manuel observed that certain students were also using better technique within the school ensemble after the informal learning experience.

**Question 4**

Fourth, the researcher asked: To what extent does participation in an informal learning context impact student self-perception? The researcher was interested in whether the informal learning experience would change how students viewed themselves as musicians, and whether they would feel that they were capable of engaging in new activities or utilizing new skills. The researcher found that many students reported that their confidence was enhanced through their participation in the informal learning environment. This may be due to the greater responsibility they felt for their achievements. Only one student reported having a lesser perception of his ability after his involvement in the informal learning environment. There was a major achievement gap present in that student’s group, with the dominant students also being the highest achieving students. With the exception of this student, participants attributed their ability to perform harder songs and independently learn new songs to their experience in the research project.
Students in Green’s study (2008a) indicated that the autonomous learning experience was more satisfying than teacher-directed learning, and had a positive impact on self-confidence. The current research supports this claim, but only under circumstances when students viewed themselves as being successful through the informal learning experience. When students achieved success, they emerged from the experience with enhanced confidence and motivation. Many students believed they were capable of exercising new skills, such as learning by ear, after their informal learning experience. A student’s self-perceptions of ability and expectancies for success or failure in any given context are strong indicators of success (Lehmann et al., 2007).

When viewing the data through a lens informed by social constructivism, the concept of autonomy emerges. Two forms of autonomy were observed. The first was individual autonomy where students perceived a sense of empowerment. These students were predominantly those identified earlier as dominant. They were leaders and that was empowering for them. Data shows that they recognized this. Then, there were conflicting views relative to the autonomy of the group. Many students responded positively to the idea of making music with peers, unbounded by external authority. These students enjoyed being able to work at their own pace, and felt less stress performing with the lack of a teacher presence. They found the experience to be liberating. Other students within the current study felt a lack of control over the learning environment due to the informal nature of the project. Certain groups of students lacked the ability to self-monitor their rehearsals effectively, a necessity for the effective functioning of an informal learning context (Lebler, 2007). Even students who displayed positive reactions to enhanced
feelings of autonomy expressed that they did not accomplish as much as they could have with the structure provided by a teacher’s instruction. It was common for students to find themselves off task or, in the case of groups of students who were not true friends, arguing.

**Themes**

As data were collected and analyzed, the following themes emerged:

1. Students perceived the ability to play by ear to be a skill that was new and previously undeveloped. Green (2006, 2008a) described playing by ear as being a defining characteristic of informal learning experiences. Tanya shared:

   I learned how to play by ear, because at first I just looked at the notes and I knew how to play them, but listening to it, it kind of threw me off because I don’t really play by ear. But, it taught me how cus if you just listen to the song and then you figure out the notes it’s a lot easier. (Student interview)

2. The most significant indicator of whether students learned from their experience in the informal learning context was not their skill level, but whether their group’s social interactions promoted collaboration consistent with democratic ideals. Allsup (2003) and Wiggins (2000) found that conditions of democracy provided a framework for unheard voices and increased the potential for self-actualization. Notes kept by the researcher in reflection to observations of rehearsals and video data indicate that in situations where students listened to each other’s suggestions and collaborated with peers in the informal learning context, they gained new skills and changed their practice. Students who felt empowered by their involvement within the informal learning experience were more likely to feel successful.
3. A lack of structure made it difficult for students to perceive themselves as successful within the informal learning context. Ms. Manuel shared:

Now, that just made me think, actually, music aptitude. Serena was in the 99th percentile, and I know this was really hard for her, which is interesting because she thinks she can’t do things but she can. Like, she says they’re too hard, but then I’ll talk through them with her, like an exercise or something in the music, and she’ll be able to do it right away. So I think she’s able to do it, but she puts a wall up because things have been hard for in the past. (Manuel interview)

This is consistent with the literature. Specifically, Heuser and Thompson (2010) stated that the absence of guidance within an informal learning context could lead to performance problems such as inefficient technique, plateaus in learning, frustration, and disillusion.

4. Being placed in a situation where students were responsible for their own learning and could work together with peers enhanced students’ perceptions of their musical ability and independence. In an interview, Sarah shared:

Sarah: I thought we got just as much work done when we had a teacher. There was nobody forcing us to do it, but that’s what made it easier . . .

In a video of a rehearsal, Mary practiced a part on her own and exclaimed:

Mary: I got it!

She then proceeded to do a dance and say, “I figured it out all by myself.” When students were able to achieve on their own, without the teacher, the accomplishments were more meaningful and resulted in enhanced perceptions of musical ability.

5. Student groups that were composed of friends worked more collaboratively and democratically than others. In Green’s (2008a) study, students formed groups with friends because the researcher believed it would be easier for students to work together and choose music that they could all agree on. Green asserted that friends were more
likely to have the same tastes in music. The current study supports that groups of friends were more likely to work together effectively.

6. The opportunity to work at one’s own pace, devoid of accountability from an authority figure, created what students perceived as being a less stressful learning environment. Students shared:

<table>
<thead>
<tr>
<th>Prompt:</th>
<th>Do you like not having a teacher? Why?</th>
</tr>
</thead>
<tbody>
<tr>
<td>John:</td>
<td>Yes, it was easier to deal with.</td>
</tr>
<tr>
<td>Tracey:</td>
<td>It was pretty cool because you didn’t have as much stress.</td>
</tr>
<tr>
<td>Jim:</td>
<td>Yes, because teachers grade things, but in this project I was not graded. The reason is grade[s] make things more stressful.</td>
</tr>
</tbody>
</table>

**Validity**

The researcher claimed validity in this study through catalytic validity, triangulation, and the conducting of an external audit (Plano Clark & Creswell, 2010). The researcher analyzed data from multiple sources, including audio and video recordings, transcriptions of field notes, transcriptions of participant interviews, and participant journal reflections. The inclusion of multiple sets of data reduced the chance of researcher bias and enabled triangulation. The researcher could compare the data from the interviews with how participants responded to journal prompts to see whether peers had influenced their responses or whether their answers were meant to please the researcher. For example, during an interview session, students from Mr. Kalas’ ensemble shared:

<table>
<thead>
<tr>
<th>Researcher:</th>
<th>And what did you guys think about playing with friends in a group?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracey:</td>
<td>We got off task a lot. Especially me, I just stared off into the distance after a while.</td>
</tr>
<tr>
<td>Jen:</td>
<td>We tended to talk and then it gets off topic.</td>
</tr>
<tr>
<td>John:</td>
<td>And David tended to play and play and play.</td>
</tr>
</tbody>
</table>
| Chris:      | And play a lot of different stuff, and especially – I decided I wasn’t going to play the guitar mainly because I didn’t know it perfectly, and because um,
whenever David would start playing a song that I know I would get even more off topic because I would start playing. But, since I don’t have a drum set in here, like we couldn’t get a drum set in here, I wasn’t just sitting there, like playing with David a totally different song which helped.

Jen reaffirmed her response through a journal response:

Prompt: Did you like not having a teacher? Why?
Jen: Not really, because we couldn’t get together and make decisions.

Identifying consistency in participant responses enabled the researcher to determine that the students were sharing their true feelings and perceptions of their experience within the informal learning context.

The researcher could also compare these responses with video or audio recordings of the participants rehearsing to gain a better understanding of situations to which participants were responding. For example, Ms. Manuel commented on the process that Jan was taking in teaching her peers:

A lot of them, their technique was holding them back. And I think that was why it was so easy for say, Jan and Ben. Especially Jan. If you just watch her she would say, “well why don’t we play it like this? [makes motion of playing quickly]” And she’d play it, because her technique is beautiful, and the other kids are still having trouble holding the bow, you know. (Manuel interview)

The researcher checked to see that Ms. Manuel’s description of Jan’s involvement was accurate by watching a video of Jan’s group rehearsing. It did appear that despite her advanced ability, Jan did not necessarily have the skill set to effectively teach. Jan was frustrated that her peers could not play what she modeled for them. During a rehearsal, Jan taught Alicia through modeling:

Alicia: You have to write that down, I can’t memorize that. [Referring to the part that Jan is playing for her.]
Jan: [Keeps playing.]
Alicia: [Frustrated look, like “come on.”]
Jan: [Continues playing until, stomping her foot, she declares] I don’t know how to write music for the viola! I don’t even know how to play it! [Meanwhile, she continues to play the viola at a higher level than Alicia who is a viola player]

Jan eventually succumbed to her group members’ wishes and wrote down the music for them. A follow up interview by the researcher with Jan further triangulated findings. During the interview she shared:

Jan: I wrote [the music] down.
Researcher: So you guys would work together and then you would write it down for everyone else?
Jan: [Nods yes.]

An external data auditor (Key, 1997) viewed all data and the researcher’s memos and codes and agreed with the researcher’s interpretations. Having an external auditor review the data ensured that the findings accurately reflected participants’ perceptions.

Catalytic validity was helpful to ensure that the research led to action (Cohen, Manion, & Morrison, 2003). The research project enabled certain participants to gain a better self-understanding of their musical ability (Denzin & Lincoln, 2005).

The data suggest that participants did perceive an impact on their practice habits, musical achievement and self-perceptions, and noted changes in their involvement with the school music ensemble. Catalytic validity confirmed that. Students shared:

Abigail: When I started playing with my Mr. Bersh group, I had a higher pitch part in the song we were playing. I was basically the soloist. Now I feel more confident about playing in front of people. We also sang our parts so I sang a solo and I was nervous but I did it, so now I can sing my heart out in the hallway. I don’t know why though, I love music with a passion.

Amy: I think I’ve gotten better by playing. I think my group helped me by understanding the notes, rhythms, and learning by ear. My playing has gotten a lot better.

Monique: I personally think I have gotten better since I played in Mr. Bersh’s groups. I have gotten better and mostly in playing music, reading music, and working with others. So, yes, Mr. Bersh’s group helped me a lot.
Conclusions

The researcher was specifically interested in adolescent instrumental students’ perceptions of their experiences in informal learning contexts. These students, who were members of formal school ensembles, were a population that had not been sufficiently studied within the context of informal learning in the past. Collectively, this experience within the informal learning environment was positive for the students who participated. Placed in a context where they possessed control over the direction and style of their learning, many students succeeded in working together as a group to create an arrangement of music they had selected. The achievement of performing a product that they had created was meaningful. The process of arranging together with peers enabled students to learn from each other, strengthening developing concepts that had been previously introduced through their formal music ensemble experiences.

For those students who were well advanced of their peers, musical challenges were not necessarily encountered, especially if the music chosen to arrange was music they were previously familiar with. Their frustrations derived from the pace at which peers were achieving, and an inability to differentiate instruction within the group. For students who remained passive throughout the project, this experience, musically, was not much different than being involved in the formal music ensemble. Albeit they received instruction from peers rather than a teacher, they still were typically receiving directions and following orders. If students had more of a readiness for playing by ear and arranging music, the results of this project may have been different. Students would have had a clearer working vocabulary with which to communicate, and if they had the
skill set to effectively notate their arrangements, this resource may have benefited a segment of the population.

Based on the difficulties encountered by the students in this project, the role of the teacher was missed in being able to differentiate instruction, keep students on task, tend to the various personalities within a group, and make sure that each member’s voice was heard. Students felt that a lack of structure was the most difficult challenge to overcome within the informal learning context. Having a teacher present to correct misunderstandings would have also strengthened the understandings that students were developing through their collaborative work.

A social constructivist lens was helpful when determining the extent to which informal music learning practices contributed to musical engagement that could impact student musicianship. According to Vygotsky, knowledge (a) is constructed based on social interactions and experience, and (b) reflects the outside world as filtered through and influenced by culture, language, beliefs, interactions with others, direct teaching, and modeling (Woolfolk, 2005). Additionally, “guided discovery, teaching, models, and coaching, as well as the individual’s prior knowledge, beliefs, and thinking affect learning” (Woolfolk, 2005, p. 175). The researcher found that the informal learning environment did enable students to teach, model, and coach each other based on their prior knowledge and beliefs regarding music. The construction of knowledge was also contingent on the social interactions within the group. When students were able to communicate effectively with each other, and were active participators within their learning environment, students learned from each other. The learning tasks students were
given, of creating their own arrangement of music they selected with peer groups, was also consistent with constructivist ideals. The absence of a teacher did not automatically result in the social construction of knowledge among peers. It was just as likely that a dominant student would directly instruct classmates. Friendship within a group seemed to play a more important role in the group’s overall success than the skill levels of the participants within the groups, but this may have been attributed to the fact that friends were able to communicate with one another more effectively. A major question that remains concerning the constructivist outlook is whether those students who are much more advanced than peers are truly learning anything from less able peers, or whether they are simply continuing to excel based on their existing skill set.

Another question that evolved from the data is whether knowledge constructed within the informal learning environment is transferrable, or whether it is bound to the time and place where it was originally constructed (Woolfolk, 2005). This was an important consideration when the researcher determined if the informal learning experience had influenced students’ participation in the formal musical ensemble. The researcher found that it was difficult for students to apply skills and techniques that were learned formally, such as the utilization of music notation, within their informal learning contexts. Additionally, there were some students who failed to see how they could use what they had learned within their informal learning context in their formal school ensembles.
Recommendations

As a result of this study, the following are recommended:

1. A greater emphasis should be placed on the “development of students’ meta-awareness of their own understandings and learning processes” (Richardson, 2003, p. 1625). A greater understanding by students of the skills that they possess will enable a more effective transfer of skills to new contexts. Abrahams (2007) described a Freirean phenomenon called conscientization that “occurs when students realize that they ‘know that they know.’ It is a powerful realization that moves them toward a more critical level of consciousness and adds dimensionality to the learning experience” (pp. 140-141). In the current research study, the researcher observed students who, despite having a basic foundation of musical knowledge, were unable to effectively communicate or exercise this knowledge in an immediately effective way. Abrahams (2007) stated “good teaching provides strategies for students to connect what they learned in one context and apply it to a new, different context. Good teachers are successful when students can learn on their own when that teacher is no longer physically present” (p. 147). Teachers might consider dedicating more time to making sure that students are aware of their own understandings to facilitate future success in new contexts.

2. Working together to create musical meaning was the most challenging task that the students encountered within their informal learning contexts. Students had difficulty verbalizing their thoughts regarding musical ideas, but benefited greatly when assistance from peers was provided in ways that could be mutually understood. Teachers should consider facilitating group dialogue that explores relevant musical concepts with the
purpose of leading to the creation and shared understanding of a topic (Richardson, 2003). These discussions might foster social negotiation and shared responsibility as a part of the learning process (Woolfolk, 2005).

3. When students played an active role within their group, they were more likely to feel empowered, learn new skills, and come away from the experience with an enhanced sense of confidence in their ability. Teachers should consider how they could situate learning in a way that encourages student ownership over aspects of their learning (Woolfolk, 2005). When students play submissive roles within an ensemble, the learning experience is not as meaningful.

4. When given the opportunity to work without a teacher, students looked elsewhere to construct meaning. Oftentimes, they looked to some source of technology for new understandings. The use of iPods, digital media, and Internet resources such as YouTube are cultural tools that adolescent students utilize. Teachers should embed learning in complex, realistic and relevant learning environments that enable students to incorporate elements of their extracurricular lives. Abrahams (2007) suggested, “good teaching is student-centered. It begins in and honors the student’s world. Good teachers use the knowledge and experiences students bring to the classroom as a bridge to new learning” (p. 147). If teachers are able to effectively and meaningfully incorporate elements of students’ personal musical lives into the music classroom, the barriers between students’ school musical lives and personal musical lives can be torn down.

5. Students struggled to utilize standard music notation as a means of communication. If students are never provided the opportunity to write their own music
or create their own meaning from notation, then a true understanding of music notation will never be attained. Teachers should evaluate how notation is used within the contexts of their ensemble rehearsals.

**Recommendations for Future Research**

The researcher’s observations and analysis did not identify any situations when developing students taught advanced students in the informal learning context. Within the social constructivist outlook of knowledge construction, study is recommended to investigate the benefits to more advanced students when interacting with peers. More research is needed to address whether those students who are much more advanced than peers are truly learning anything from less able peers, or whether they are simply continuing to excel based on their existing skill set.

Researchers might be well served to study whether the skills learned within an informal learning context equip students with understandings that will support music learning and involvement once they leave the formalized school setting. Researchers have suggested that involvement in informal music contexts promotes autonomous music making (Abrahams, 2010; Green, 2006, 2008a), and one can surmise that autonomous music makers would be more likely to continue making music when the structure of a formal music ensemble is absent. Informal learning contexts may provide students with experiences that would build skills that would transfer beyond the borders of the formal music classroom. However, there is a dearth of research that has the longevity to accurately comment on the permanence of skills learned within informal learning contexts.
A major difference between the London setting of Green’s (2006, 2008a) research and the United States public school setting of the present study is the role that the teachers played. Within the *Musical Futures* curriculum, D’Amore (2009) outlined the role of the teacher as being responsive to student actions and needs. After a task had been set for students, teachers stood back, observed students and offered guidance and support based on what students had set out to achieve. Teacher help most often took the form of modeling. In the current study, there was little to no modeling present at any of the sites. Students were largely responsible for their own learning that occurred within their group setting. Certain groups were more effective than others at making sure that everyone was engaged in the learning process. The student groups that were most successful usually had someone who filled the role of a mediator, listening to individuals’ ideas and rephrasing them in ways that the entire group could understand. There is a need for more in-depth research into understanding the impact of having a mediator, whether that individual is a student or teacher, to enhance communication within an informal learning environment.

Based on the researcher’s observations of the participants’ inability to use music notation to effectively write down ideas and communicate to peers, it is evident that the school music instruction that students had received since kindergarten had not adequately prepared them to read and write music. The method that is currently being used to teach formalized music notation must be called into question when students who have chosen to dedicate themselves to performing on an instrument – students who have received music instruction for years through instrumental and general music programs – are unable
to notate simple melodies. Research is needed to determine the role of music notation within school music classes, and best practice for future instruction so that students are able to truly understand music notation.

Additionally, with the increasing availability of technology, students are more likely to learn how to play a song by watching an online video on a website such as YouTube, or listening to their iPod, than paying for sheet music. The students’ participation in the informal learning contexts uncovered pressing issues of the changing conceptions of music literacy in the 21st century, and the importance of providing students with opportunities to construct musical meanings with peers. Multiple students even referred to iPods as being the most valuable part of the research project. Research is needed to inquire into the changing roles of technology in the ways that students construct meaning.
REFERENCES


Heuser, F., & Thompson, B. L. (2010, September). *The formal/informal music learning continuum*. Session presented at the meeting of the College Music Society, Minneapolis, Minnesota.


APPENDIX A

HUMAN SUBJECTS TRAINING

CITI Collaborative Institutional Training Initiative

Course in The Protection Human Subjects Curriculum Completion Report
Printed on 8/19/2010

Learner: Brian Bersh (username: bbersh)
Institution: University of Delaware
Contact Information Phone: 215-695-3703
Email: bbersh@udel.edu

Graduate Students:

Stage 1. Basic Course Passed on 05/30/10 (Ref # 4472795)

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<th>Date Completed</th>
<th>Score</th>
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</thead>
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<td>05/30/10</td>
<td>3/3 (100%)</td>
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<tr>
<td>Students in Research - SBR</td>
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Certification of Human Subjects Training

The University of Delaware certifies that  

Brian Bersh  
(Name of researcher)

attended an institutional training session on the use of human subjects in research on

May 14, 2008  
(Date)

The session included the following topics:

- The Belmont Report
- Federal regulations for using humans in research (45 CFR 46)
- The University's Federalwide Assurance
- Informed consent
- Institutional procedures
- Sources for additional information.

Elizabeth Duggins Peloso  
IRB Administrator

Research and Graduate Studies  
University of Delaware  
Newark DE 19716  
302-831-2136
Dear Parent or Guardian,

As a graduate student in music education, I am conducting a master’s thesis research project designed to enhance your student’s independence as a musician. I am interested to see how providing students the opportunity to make music with each other independent of direct teacher involvement affects their musical achievement and perceptions of musical ability.

I will be working with Mr./Mrs. _____________ during the fall, as your student is given the chance to create musical arrangements in small groups. To study the effect that this type of music instruction has on student interest and involvement in music, some of the rehearsal time will be video and/or audio recorded, and I will also conduct informal interviews with the students and teachers. In addition, students may be asked to keep a journal of their experience arranging and playing music in their groups. Video and audio taping will be used so that I can refer back to rehearsals to see and hear things that I may not have been able to pick up during my in-class observations. Students will also be given a copy of a pre-recorded rehearsal to reflect on their performance.

Excerpts of recordings may be used in professional settings for presentation purposes. Your student’s identity will be kept confidential and no students will be identified in the research. Instead, student names will be replaced with pseudonyms. If you have any questions regarding this research study, please contact Brian Bersh at bbersh@udel.edu. Should you desire more information regarding the rights of participants in research, please contact the University of Delaware Research Office at (302) 831-2137 or uduresearch@udel.edu.

Sincerely,

Please return bottom half to ____________________________ for your son or daughter to participate in the project

Parent/Guardian Consent: Your signature below indicates that you do grant permission for your student to participate in the above study. It indicates that you understand the voluntary nature of this study, and that you may withdraw your student from the study without penalty. For further information, please contact Brian Bersh.

I hereby give permission for ____________________________________________ to participate in this research study.

Signed,

Parent or Guardian: ________________________________________       Date: _____________
APPENDIX C

STUDENT JOURNAL PROMPTS

1. Why did you choose this music?
2. What changes did you make to the piece of music and why?
3. What was easy about this project?
4. Was this project difficult? In what ways?
5. Did you like not having a teacher? Why?
6. Was it difficult not having a teacher? If so, what was difficult?
7. What did you learn during this project?
8. Could you use what you learned in your ensemble rehearsals?
9. What was the most valuable part of this project?
10. Have you changed because of this project? In what ways?
APPENDIX D

PRE- & POST- PROJECT QUESTIONNAIRE

Date _________
Grade _________

Project Questionnaire

1) What instrument(s)/voice part do you play/sing in school? Call this your primary instrument(s).
_______________________________________________________________________.

a) How often do you practice this instrument(s)/singing? (Check the option that best fits from each column)

- less than 15 minutes/practice session
- 15-30 minutes/practice session
- 30-45 minutes/practice session
- over 45 minutes/practice session

- once a week
- 2-3 times/week
- 4-5 times/week
- 6-7 times/week

b) Describe an average practice session with your primary instrument(s)/singing. (Check all that apply). I practice:

- Scales and/or Rudiments
- Ensemble music
- Composing my own music/Making my own songs.
- Etudes
- Explore the instrument just to see what I can do
- Imitate music I listen to on my iPod/radio
- other: ____________________________________________.

c) How often do you play this instrument(s)/sing with other people outside of school? (Check the option that best fits)

- never
- I tried it once
- Once a week
- 2-3 times/week
- 3 or more times/week
2) What ensemble(s) are you a part of in school?
_______________________________________________________________________
_______________________________________________________________________

3) What instrument(s) do you have at home?
_______________________________________________________________________
_______________________________________________________________________

4) What instrument(s) do you play outside of school ensembles/or do you sing? Call this your secondary instrument(s).
_______________________________________________________________________

   a) How did you learn to play this instrument(s)/sing? (check all that apply)

   ___self taught
   ___private lessons
   ___friend and/or family member
   ___YouTube or other online source
   ___other: __________________________.

   b) How often do you practice this instrument(s)/singing? (Check the option that best fits from each column)

   ___less than 15 minutes/practice session       ___once a week
   ___15-30 minutes/practice session             ___2-3 times/week
   ___30-45 minutes/practice session             ___4-5 times/week
   ___over 45 minutes/practice session           ___6-7 times/week

   c) Describe an average practice session with your secondary instrument(s)/singing. I practice:

   ___Scales and/or Rudiments
   ___Ensemble music
   ___Composing my own music/Making my own songs.
   ___Etudes
   ___Explore the instrument just to see what I can do
   ___Imitate music I listen to on my iPod/radio
   ___other: __________________________.
d) How often do you play this instrument(s)/sing with other people?

__never
__I tried it once
__Once a week
__2-3 times/week
__3 or more times/week

5) Are you a part of a band/ensemble outside of school? If so, what is it called? What kind of music do you play?

________________________________________________________________________
________________________________________________________________________

(Questions 6 & 7 for pre-project use only)
6.) Check the styles of music that you enjoy playing. Check all that apply.

___ Classical        ___ R&B
___ Country         ___ Rap
___ Rock              ___ Pop
___ Jazz                ___ Latin
___ Punk              ___ Reggaeton
___ Singer/Songwriter ___ Other:______________________________.

7.) Check the styles of music that you enjoy listening to.

___ Classical        ___ R&B
___ Country         ___ Rap
___ Rock              ___ Pop
___ Jazz                ___ Latin
___ Punk              ___ Reggaeton
___ Singer/Songwriter ___ Other:______________________________.
8. Has involvement in this project changed the way you practice, or any perceptions that you have of your own musical ability?

POST PROJECT QUESTIONS ASKED TO STRING STUDENTS IN SUBSTITUTION FOR QUESTION 8.

1. Since playing with your group in Mr. Bersh’s project, have you changed the way you practice? If you did change the way you practice, how did it change?

2. Have your perceptions of (the way you think about) your musical ability (your skill or your talent) changed at all? In other words, do you think you’ve gotten better at your instrument since playing in Mr. Bersh’s group? Do you think playing in those groups made you a better player?
APPENDIX E

INTERVIEW GUIDE FOR TEACHERS

1. Have any of the students involved in the project surprised you in their level of involvement?

2. Have there been any noticeable changes in the participation of any of these students during ensemble rehearsals?

3. Have you observed any benefits to students’ achievement or skill as a result of this project?

4. Can you think of any practical, positive applications of informal learning in your ensemble rehearsals?

5. Did anything happen that surprise you – that you did not expect to see?

INTERVIEW GUIDE FOR STUDENTS

1. Have you enjoyed any certain parts of the project more than other? Which parts?
   Why?

2. Have you disliked any certain parts of the project more than other? Which parts?
   Why?

3. What, if anything, have you learned during these rehearsals?

4. How much or how little you have been able to accomplish in your rehearsals?

5. Compare your approach to practicing and preparing for your ensemble music versus your group music. What are the similarities? The differences?

6. How did you feel about the lack of formal guidance provided by your teacher?

7. How was it working with your friends in a group?
APPENDIX F

CODES FOR ANALYSIS

To what extent does participation in an informal learning context impact student practice?

I. Interpersonal Relations
   A. Dominant
      1. Student makes decisions.
         a. Decision is music related.
         b. Decision is unrelated to music.
   B. Submissive
      1. Student takes direction.
         a. Decision is music related.
         b. Decision is unrelated to music.
   C. Constructive.
      1. Student makes suggestions.
         a. Decision is music related.
         b. Decision is unrelated to music.
      2. Student considers divergent ideas
         a. Decision is music related.
         b. Decision is unrelated to music.

II. Learning Approach
   A. Before
      1. Student applies concepts learned formally.
   B. After
      1. Student applies concepts learned informally.

III. Skill Level
   A. Advanced
      1. Student with greater skill/ability reacts to the informal learning environment.
         a. Student experiences frustration.
         b. Student teaches peers.
         c. Student learns from peers.
B. Developing
   1. Student with lesser ability reacts to informal learning environment.
      a. Student experiences frustration.
      b. Student teaches peers.
      c. Student learns from peers.

To what extent does participation in an informal learning context impact student musical achievement?

I. Achievement
   A. Static Achievement
      1. Outcome has been reached before in another music context.
   B. Novel Achievement
      1. Outcome is new to the student, and attributable to informal learning experience.

To what extent does participation in an informal learning context impact student experience in their school ensemble?

I. Musical
   A. Ability
      1. Student uses skills in school ensemble that were learned in informal learning context.
   II. Social
      A. Behavior
         1. Student behavior is altered as a result of informal learning experience.
            a. Practice routines are altered.
      B. Attitude
         1. Student attitude is altered as a result of informal learning experience.
            a. Student attitude toward music changes.
            b. Student attitude toward peers changes.
            c. Student attitude toward teacher changes.
         2. Student exhibits enhanced motivation.
            a. Student expresses enjoyment as a result of informal learning experience.
To what extent does participation in an informal learning context impact student self-perception?

I. Ability
   A. Teacher
      1. Teacher indicates a change in their perception of student ability.
   B. Student
      1. Student indicates a change in their perception of their own ability.
         a. Student confidence is enhanced.
         b. Student confidence is diminished.

II. Autonomy
   A. Control
      1. Student feels in control of learning situation within informal learning context.
      2. Student feels a lack of control in informal learning context.

III. Structure
   A. Pressure
      1. Student feels stressed due to a lack of a clear structure and/or clear objectives and/or a clear leader.
      2. Student feels less stress as a result of the lack of a clear structure and/or clear objectives and/or a clear leader.
   B. Accomplishment
      1. Student feels they were able to accomplish more due to the lack of structure provided by a teacher.
      2. Student feels they were not able to accomplish as much as they would have given the structure provided by a teacher.

Note. Questions listed are the project research questions. Roman numerals (I.) refer to code categories. Capital letters (A) refer to code concepts. Numbers (1.) refer to code properties. Lower case letters (a.) refer to code dimensions.
APPENDIX G

PARTICIPANTS

Rollins High School
Teacher: Ms. Eriksson
Ensemble: 9th Grade Jazz Band
Group Song: Another One Bites the Dust, Queen.

<table>
<thead>
<tr>
<th>Name</th>
<th>Instrument</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eric</td>
<td>Alto Saxophone</td>
<td>14</td>
</tr>
<tr>
<td>Joseph</td>
<td>Trumpet</td>
<td>14</td>
</tr>
<tr>
<td>Trevor</td>
<td>Drum Set</td>
<td>14</td>
</tr>
<tr>
<td>Josh</td>
<td>Trumpet</td>
<td>14</td>
</tr>
<tr>
<td>Clark</td>
<td>Percussion</td>
<td>15</td>
</tr>
<tr>
<td>Dan</td>
<td>Trumpet</td>
<td>14</td>
</tr>
<tr>
<td>Jared</td>
<td>Bass Guitar</td>
<td>14</td>
</tr>
</tbody>
</table>

Ashburn Charter School for the Arts
Teacher: Mr. Kalas
Ensemble: 8th Grade Band
Group Song: I Want You Back, The Jackson 5

<table>
<thead>
<tr>
<th>Name</th>
<th>Instrument</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chris</td>
<td>Drum Set</td>
<td>14</td>
</tr>
<tr>
<td>John</td>
<td>Trumpet &amp; Piano</td>
<td>14</td>
</tr>
<tr>
<td>David</td>
<td>Bass &amp; Flute</td>
<td>13</td>
</tr>
<tr>
<td>Tracey</td>
<td>Trombone</td>
<td>13</td>
</tr>
<tr>
<td>Jen</td>
<td>Trumpet</td>
<td>14</td>
</tr>
<tr>
<td>Elizabeth</td>
<td>Clarinet</td>
<td>13</td>
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</table>
Ashburn Charter School for the Arts  
Teacher: Ms. Manuel  
Ensemble: 6th Grade Orchestra  
Group A Song: Christmas Medley (including *Let it Snow* and *Greensleeves*)

<table>
<thead>
<tr>
<th>Name</th>
<th>Instrument</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary</td>
<td>Violin</td>
<td>11</td>
</tr>
<tr>
<td>Amy</td>
<td>Viola</td>
<td>11</td>
</tr>
<tr>
<td>Jan</td>
<td>Violin</td>
<td>11</td>
</tr>
<tr>
<td>Alicia</td>
<td>Viola</td>
<td>11</td>
</tr>
</tbody>
</table>

Group B Song: *The Battle Hymn of the Republic*

<table>
<thead>
<tr>
<th>Name</th>
<th>Instrument</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben</td>
<td>Cello</td>
<td>12</td>
</tr>
<tr>
<td>Carlos</td>
<td>Violin</td>
<td>11</td>
</tr>
<tr>
<td>Cameron</td>
<td>Bass &amp; Piano</td>
<td>12</td>
</tr>
<tr>
<td>Jim</td>
<td>Bass</td>
<td>11</td>
</tr>
</tbody>
</table>

Group C Song: *Deck the Halls*

<table>
<thead>
<tr>
<th>Name</th>
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<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanya</td>
<td>Violin</td>
<td>11</td>
</tr>
<tr>
<td>Julia</td>
<td>Violin</td>
<td>11</td>
</tr>
<tr>
<td>Maura</td>
<td>Violin</td>
<td>11</td>
</tr>
</tbody>
</table>

Group D Song: *Greensleeves*

<table>
<thead>
<tr>
<th>Name</th>
<th>Instrument</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarah</td>
<td>Violin</td>
<td>11</td>
</tr>
<tr>
<td>Erin</td>
<td>Violin</td>
<td>11</td>
</tr>
<tr>
<td>Paul</td>
<td>Cello</td>
<td>11</td>
</tr>
</tbody>
</table>

Group E Song: *Santa Claus is Coming to Town*

<table>
<thead>
<tr>
<th>Name</th>
<th>Instrument</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abigail</td>
<td>Violin</td>
<td>11</td>
</tr>
<tr>
<td>Rehka</td>
<td>Violin</td>
<td>11</td>
</tr>
<tr>
<td>Serena</td>
<td>Violin</td>
<td>11</td>
</tr>
<tr>
<td>Monique</td>
<td>Violin</td>
<td>11</td>
</tr>
</tbody>
</table>