SELF-DETERMINED MUSIC PARTICIPATION: THE ROLE OF PSYCHOLOGICAL NEEDS SATISFACTION, INTRINSIC MOTIVATION, AND SELF-REGULATION IN THE HIGH SCHOOL BAND EXPERIENCE

BY

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ABSTRACT

Many decades of research on achievement in schools has shown that motivation is a key ingredient for student success. As most band directors might testify, this is true in the study of music. However, there are many ways in which band directors conceive of and try to affect the motivation of their students as they strive to inculcate a sense of commitment, high levels of musical participation, and personal growth through learning an instrument.

In this study, self-determination theory (SDT) was used to explore motivation in band, and answer questions about the type, in addition to the amount, of motivation that is evident in students who are enrolled in high school band programs. SDT offers an approach to motivation, which couples the concept of control with perceived satisfaction of psychological needs, to explain the types of support mechanisms that result in intrinsic motivation and autonomous regulation.

Questionnaire and interview data were collected to examine key factor relationships, determine if students' characteristics or enhancement opportunities were related to aspects of their motivation profiles, and better understand how those factors are experienced through the eyes of high school band students. In order to facilitate this inquiry, a sequential mixed-method study was developed. A methodology was formulated based on a review of the literature, the development and implementation of questionnaire scales from previous research, as well as interviews of students with characteristic motivation profiles. Multiple regression analysis assisted in determining the linear relationships that existed among the self-determination theory constructs and in the

creation of a summary model of significant factor interactions in the high school band context.

Key findings demonstrated positive relationships between student perceptions of (a) components of psychological needs satisfaction and intrinsic motivation, (b) low amounts of pressure and psychological needs satisfaction, (c) intrinsic motivation and attitudes about future engagement in music activities, and (d) between high levels of engagement in enhancement opportunities and the variables of autonomous regulation and attitudes about future engagement. The results suggest that teachers can better prepare students for meaningful, lifelong engagement with music by focusing on more student-centered approaches that provide support for psychological needs and intrinsic motivation.

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CHAPTER 1: INTRODUCTION

Background

As a high school band director, I often wondered why some students appeared to be highly motivated, while others seemed hardly motivated at all. While band directors may agree that motivation is a key ingredient for student success, we conceive of and try to affect the motivation of our students in a variety of ways (Bransford, Brown, & Cocking, 2000; Schunk, Pintrich, & Meece, 2008). In the very beginning of my career, I felt that all students were motivated only by the musical experience itself. Since then, I have come to realize that students' motivation depends on a complex array of personal and environmental influences, which go well beyond the musical experience itself to include different forms of verbal encouragement, instructional feedback, rewards and awards, as well as social networking and support.

Beliefs about student motivation affect the decisions that we make as teachers. For band directors, beliefs shape how we feel about the value and purpose of chair auditions, incentives, competition, grading, and communication with students. Each of my decisions as a teacher regarding these and other issues was made with two things in mind: how the decision would affect the group as a whole, and how it would impact each student's individual experience in band. In a cooperative learning environment such as band, it is difficult to tailor every decision to meet the needs of every student. However, it is critically important to consider the motivational diversity of our students when making decisions.

Range of Motivation

It may be easy to think of motivation one-dimensionally in band with motivation existing in an amount that manifests itself in how much students appear to be engaged and to what degree they are making contributions to the group. We can identify highly motivated students by their choices, effort, persistence, and achievement (Schunk et al., 2008). Although we use some of these indicators to determine the quantity of motivation, which is evident in how involved the students appear to be, it is critical to also consider the quality of motivation, in terms of why students feel the way they do.

Moving away from a View of Conditioning as Motivation

From a behaviorist perspective, B. F. Skinner (1974) asserted that the likelihood of a behavior occurring is a function of the desirability of the consequences of that behavior to the person carrying out that behavior. In operant conditioning terms, a positive reinforcement will increase the likelihood that the behavior would happen again, while a negative reinforcement would decrease the likelihood that the behavior would happen again. These operant approaches, led by the work of Thorndike (1913) and Skinner (1938, 1953, 1971, 1974), focus on the role of these types of reinforcements in directing behavior.

Teachers use a variety of strategies to tap into this basic view of motivation. On the one hand, incentives, rewards, sticker charts, and extra credit can serve as positive reinforcement. On the other hand, lowering grades, verbal redirection, and withholding privileges can be seen as negative reinforcement (Kohn, 1999). Each of these strategies can be effective in molding student behavior. However, some teachers may ask themselves, as I did, why there is not always a uniform response from students to each of

these types of reinforcements. Also, it is important to consider why such reinforcements are necessary in the first place, and whether a desirable behavior would persist in the absence of teacher intervention.

An easy answer to these problems may be to simply say that all students are different, and that they will react differently to each situation. As a teacher, I often heard this type of general explanation from others, and based upon the research in education, I feel as though they mostly got the explanation right; students are unique. Yet, I observed that the motivational approaches that my colleagues continued to use in their classrooms did not always account for such differences.

Though operant psychologists have focused on external controls of behavior, other theorists have been interested in whether or not students internalize their motivation and whether or not their behavior is caused by an internal impetus to act; and they embrace a cognitive perspective (Phye, 1997). These lines of inquiry developed a more individualized conceptualization of motivation, which takes students' perspectives into consideration. Such a view can be valuable to educators, because if our aim is for students to be motivated in the absence of the structure of the school, we will also need to consider strategies that account for the unique motivational structure within them that they will take with them after they graduate.

Intrinsic Versus Extrinsic Motivation

As the literature review will show in Chapter 2, intrinsic and extrinsic motivation have been used in many varied settings to explain the differences between internal and external influences on motivation and behavior. This conception is built upon the premise that every behavior is regulated from outside oneself, inside oneself, and in combination

(i.e., orientation; Deci, 1971; Deci & Ryan, 1985b; Ryan & Deci, 2000b). Reinforcements from a student's environment (e.g., punishments and rewards) serve as the most basic form of extrinsic motivation, in which the impetus to act is generated from outside oneself. On one hand, externally regulated behavior is a basic type of motivation, in which a student may try to obtain or avoid a specific outcome as defined by others. Intrinsic motivation, on the other hand, involves conscious valuing of an action, and it fuels behavior based upon internal drives (e.g., interest and enjoyment; Deci & Ryan, 1985b; Schunk et al., 2008).

External motivation is powerful and important in schools, since not everything is inherently interesting to everyone. Rules and classroom structures are essential components to ensuring order and learning within the school community. Yet, research over the past several decades has shown that fostering intrinsic motivation is key to long-term engagement and well-being in a variety of contexts, including education (Deci & Ryan, 1985b; Ryan & Deci, 2000b, 2002; Sheldon & Elliot, 1999). If we want students to participate in and enjoy music over their lifetime, we may need to be more creative with the manner in which we implement certain aspects of our ensemble instruction so we can help maximize students' internal reasons for participating; not just foster reactions to the structure that exists within the school, which is a structure that will be gone after the students leave the high school band.

A practitioner's perspective. The contradiction between teaching practice and teachers' desire to motivate their students was driven home to me quite convincingly by a colleague's comment at a recent conference. While commenting on a poster presentation of the study documented here, she expressed her concern about the orientation of

motivation in band and other music ensemble courses. She offered a perceptive critique regarding her concern that, although we like to think that we are having an impact on students' intrinsic motivation in music, we do a lot of basic, extrinsic approaches instead. The literature also demonstrates that teachers tend to use more controlling, extrinsic strategies in their teaching than autonomy-supportive, intrinsic strategies (Newby, 1991), and the band classroom is no exception (see Robinson, 2008).

The implication of such a realization is that if we want students to be flexible and independent in music throughout their lives, then we need to foster intrinsic motivation through our teaching. For students that come to rely heavily on extrinsic factors for motivation in the classroom, it may be necessary for them to find similar environments in the future that satisfy the same external nutriment that they received before. Considering the unique nature of the high school band experience, it may be difficult later in life to duplicate the external motivators that students have come to rely upon.

The Role of Feedback and Locus of Causality

The question of how to best support our students' intrinsic motivation is not easily answered. It is not simply a matter of whether competition or awards, for example, are good or bad parts of the curriculum. It is not reasonable, nor is it appropriate, to expect that a band director would simply dispense of these types of activities (e.g., competitions, festivals, auditions, performances), which may be traditionally, culturally, and functionally important to the school band program, in order to avoid activities that provide strong external supports for motivation. It is a much more defensible conclusion to suggest that teachers can be effective by being mindful about the ways in which they conduct lessons, frame experiences, and talk about band with their students.

Students bring varying prior experiences into the classroom, and they view situations differently as a result (Bransford et al., 2000; Gembris & Davidson, 2002; Lewin, 1935). Therefore, it would be prudent to take these experiences and the resulting motivation profiles into consideration during planning and instruction. As will be shown in Chapter 2, types of feedback from teachers have a significant impact on how students view their experiences. The informing and controlling characteristics of feedback, for example, have been discussed in music education in terms of the role of mastery and performance experiences in goal formation (O'Neill & McPherson, 2002).

The nature of perceived control in teacher feedback and student experiences is central to the concept of *locus of causality* (i.e., whether a behavior is perceived to be generated by interests and desires, or by some external influence), which is reflected in the intrinsic or extrinsic regulatory behaviors in a particular context (Deci & Ryan, 1985b). Students whose behavior is internally-regulated, are motivated by interest and enjoyment that is generated from within themselves (Deci & Ryan, 1985a). To find inherent satisfaction in a particular activity, students participate without regard for external influences. Conversely, students whose behavior is externally regulated, are motivated by external contingencies (Deci & Ryan, 1985b). Such students find satisfaction through external influences, such as winning awards, achieving good grades, or attempting to impress others. As such, their satisfaction is controlled to some degree by external factors.

Although the regulatory behaviors are presented above as polarities, it is also important to consider the combination of regulatory agents on student behavior in band. A combination of regulatory styles can exist in varying degrees between the external and

internal endpoints. Even though students may be able to achieve some type of satisfaction at all points along the regulatory continuum, perceived autonomy (i.e., non-reliance on external pressures) may lead to a better overall experience and well-being (Ryan & Deci, 2000b).

In my high school ensembles, I often wondered why some high-achieving students reacted so negatively to receiving a non-perfect score at a contest, missing a few points on a playing test, or not doing as well as expected on a chair audition. When enjoyment was contingent upon social comparisons and external reinforcements, it seemed as though these students experienced more stress than if their motivation for a particular activity was intrinsic. Despite having positive evidence to the contrary, students with this motivation profile seemed to feel incompetent, focused on the extrinsic aspects of the experience, and needed considerable encouragement along the way.

Perceived Psychological Needs Satisfaction

Perceived control has been a key consideration in several motivation theories (e.g., Bandura, 1997; Rotter, 1966; Weiner, 1985), including self-determination theory (Deci & Ryan, 1985a, 1985b). Deci and Ryan, for example, coupled the concept of control with perceived psychological needs (viz., competence, autonomy, and relatedness) satisfaction to explain support mechanisms for intrinsic motivation and autonomous regulation. As will be discussed in Chapter 2, self-determination research has shown positive relationships between psychological needs support, perceptions of psychological needs satisfaction, intrinsic motivation, and well-being. Because of this, self-determination theory was chosen as the theoretical basis of this study.

The Study

Need for the Study

In conversations with other band directors, I am amazed by such a wide variety of viewpoints on what motivation means to them in their classrooms, the accommodations they make for diversity of motivation, and the methods that they use to encourage student action. One such viewpoint centers on the assumption that most students in a certain size or type of program will have a predictable amount of motivation. There are a couple of assumptions embedded in this conception. Firstly, it represents a one-dimensional view of motivation as an amount, which neglects the internal-external dimension of motivation orientation. Second is the assumption that there is a link between a certain type of school or community and the amount of motivation that most students will possess in that context. These viewpoints have led to a *one-size-fits-all* approach to motivation in the classroom, and it reflects the approach we often see in music education.

A more comprehensive view of motivation in band was reflected in a conversation that I had with a veteran high school band director. In a comment made to me at a state music festival, he shared that he felt that the ways students think about an experience can be more important than some of the technical aspects that we put so much emphasis on, and that the ways that we talk about the experience have serious implications for what we can teach from a musical standpoint. As we discussed motivation further, he talked about how important it is for him to be aware of and to moderate the comparisons that students make between each other, have an awareness of the social dynamics of the ensemble, and foster an environment in which students feel as though they can control their learning in important ways.

The variety of views on motivation in band illustrates the need for this study. A study is needed that examines the types of motivation experienced by students in the high school band context. Because it focuses on students' perceptions of psychological needs and intrinsic motivation, self-determination theory was chosen as the theoretical basis from which to explore these issues. Although robust research has been conducted in other academic areas using self-determination theory models, the research needs to be expanded within music education.

Purpose of the Study

The purpose of this study was to examine students' motivation profiles in the high school band context, as determined by their perceptions of psychological needs satisfaction, intrinsic motivation, and self-regulation. These factors have been shown to be influential in persistence and well-being in other areas of education, and they serve as a basis for this study dealing with high school band.

Research Questions

The purpose statement led to the following research questions, which guide the process of determining the extent to which self-determination theory is useful in explaining high school band students' motivation profiles:

1. Using the main constructs of self-determination theory, which combination of factors provides the most powerful depiction of the relationship between these factors in explaining high school band students' motivation profiles?
2. To what extent do subjects differ in terms of their motivation profiles, based upon personal characteristics (e.g., gender and year in school), teaching and learning

contexts (e.g., school size), and enhancement opportunities (e.g., lessons and out-of-school participation)?

3. In what ways can personal accounts of students with particular motivation profiles (i.e., high, low, or anomalous profiles) be used to confirm and enhance the findings of the psychometric measures of self-determination, while enriching the story of how students' motivation profiles contribute to their interpretation of the high school band experience?

In order to answer these research questions, a two-phase study was developed. In Phase 1, survey data were collected from high school band students, using several existing surveys that have been used in self-determination research, including the Basic Psychological Needs Scale (BPNS), the Intrinsic Motivation Inventory (IMI), the Learning Self-Regulation Questionnaire (LSRQ), and the Learning Climate Questionnaire (LCQ). These surveys were chosen based upon parallel applications in similar contexts, such as organized group activities, secondary education, and in studies that investigated factor relationships within self-determination theory. The specifics of these applications are discussed in Chapter 4.

Interviews were conducted in Phase 2 in order to provide a richer description of the students' experiences in band, as related to their motivation profiles. This phase was designed to create a description of the high school band experience through the eyes of students and as interpreted through the lens of a self-determination framework. The procedures used in the interview phase are discussed in Chapter 6.

Delimitations

The setting for this study was chosen in order to examine student motivation in the high school band environment. This setting is characterized by high school band participation in activities such as the state music educators association conferences and festivals, marching band competitions, solo and ensemble contests, interaction with students and faculty at a local university, opportunities for private study, and opportunities for community music involvement. While this is not an exhaustive list, and although not all schools in the study participated in all of the aforementioned activities, it none-the-less represents some of the types of activities that are typical to, and are commonly shared by many high school band programs. Subjects were recruited from five such high schools, which reside in a community in the Midwest.

Based upon research in other areas, one of the assumptions of this study is that there will be discernable variation of motivation profiles among students in band. Also, band is an elective subject in most schools. Thus, the second assumption is that students who are enrolled in band classes will be more motivated toward band than their peers who are not participating. One limitation of the study is that it does not extend to account for the students who have never joined or who have dropped out of band; although such subjects in future studies may provide valuable insight to issues of incongruence between students' motivation profiles and the opportunities offered to them in the band program at their school.

In addition to limiting subjects to band students, the focus of this study is also limited to examining students' motivation within the band context. The scope of the study is intentionally exclusive of motivational profiles in other aspects of the subjects' lives.

An assumption in this study is that people are motivated in unique ways and amounts in each aspect of their lives; and therefore, they posses motivation profiles that are contextually specific. It is possible to conceive of a composite view of a person's motivation profile in life more generally. However, the focus of this study is limited to subjects' participation in high school band.

Definitions of Key Terms

Basic psychological needs theory is the "basis for making predictions about the conditions that promote optimal versus nonoptimal outcomes in terms of… the quality of behavior and experience within a specific situation" (Ryan & Deci, 2002, p. 6). Environments that allow the perceived satisfaction of *autonomy* (the degree to which one is in control of their behaviors), *competence* (the ability to perform a task well), and *relatedness* (the degree to which a person feels they are cared for by individuals and groups of people in their environment) are "predicted to support such healthy functioning, whereas factors associated with need thwarting or conflict are predicted to be antagonistic" (Ryan & Deci, 2002, p. 6).

Extrinsic motivation is the drive behind behavior that leads to a separable outcome; considered a "pale (even if powerful) form of motivation that contrasts with intrinsic motivation" (Ryan & Deci, 2000a, p. 55).

Intrinsic motivation is the drive to do something because it is interesting or enjoyable; considered a "natural wellspring of learning and achievement that can be systematically catalyzed or undermined by parent and teacher practices" (Ryan & Deci, 2000a, p. 55).

Motivation is the fuel of human behavior. Originating from the Latin verb *movere* (to move), it is "the process whereby goal-directed behavior is instigated and sustained" (Schunk et al., 2008, p. 4).

Motivation profile refers to the "interaction of factors that determine and influence the process of engagement in a specific activity" (González-Moreno, 2009, p. 20).

Perceived locus of causality refers to the difference between personal and impersonal causality (Deci & Ryan, 1985b), which differentiates between those actions that are caused by one's interests and desires and those perceived as being initiated by some external event (deCharmes, 1968).

Regulation is the degree and manner in which a person is meta-cognitively, motivationally, and behaviorally active (Schunk & Zimmerman, 2008; Zimmerman & Schunk, 1989).

Self-determination theory was founded in "a dialectical view which concerns the interaction between an active, integrating human nature and social contexts that either nuture or impede the organism's active nature" (Ryan & Deci, 2002, p. 6); with special emphasis on the environmental supports for an individual's sense of autonomy, competence, and relatedness, as explained by the organismic integration theory, cognitive evaluation theory, and basic needs theory (Hagger & Chatzisarantis, 2007).

Self-regulation refers to the "process by which learners personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of learning goals" (Schunk & Zimmerman, 2008, p. vii).

Structure of this Document

The remaining chapters explain the theoretical context, the method, the analysis, and the conclusions drawn from this study. Chapter 2 provides a review of the literature, including research from and explanations of theories that are relevant to this study. Chapter 3 provides an overview of the structure of the study, including an explanation of the ways in which quantitative and qualitative research methods were mixed in this study. Chapter 4 contains a detailed look at the construction of the questionnaire instrument, including refinement through pilot studies, and the results of the main study questionnaire are detailed in Chapter 5. Information about the method and development of the Phase 2 interviews can be found in Chapter 6, including refinement through a pilot of the interview method. The interview results from the main study can be found in Chapter 7, and Chapter 8 provides an overall discussion, implications, limitations, and suggestions for future research.

Concluding Statement

The development of this study was influenced primarily by my experiences as a teacher. As I read research literature related to my experiences, I realized that there were many theories, both in and outside of education, which addressed student behaviors in terms of motivation. The elements of self-determination theory most closely aligned with the issues embedded in my questions about how students experience high school band. The self-determination theory framework provides a theoretical basis through which questions can be answered about how students perceive their abilities, environmental pressures, independence, confidence, and goal setting.

CHAPTER 2: LITERATURE REVIEW

Historically, motivation researchers have used a variety of frameworks, ranging from functional, to behavioral, to cognitive types of theories (Pintrich & Schunk, 2002). This range of theories includes those focused on volition and will (James, 1890), instincts (Freud, 1934, James 1890; McDougall, 1926), conditioning (Pavlov, 1927; Skinner, 1953; Thorndike, 1913), drive (Hull, 1943; Miller, 1948; Mowrer, 1960), purpose (Tolman, 1932), arousal (Cannon, 1927; James, 1890), humanism (Maslow, 1954; Rogers, 1963), interest (Dewey, 1913; Herbart, 1965), and social learning (Rotter, 1966).

More recent theories continue to expand upon the shift from the social evolutionary approach of functionalism, through the environmental approach of behaviorism, to the organism-centered social-psychological stance of cognitive psychology (e.g., the shift that scientists like Kurt Lewin made to the social-psychological perspective). This shift was prompted by a "cognitive revolution" (Bredo, 1997, p. 22) in the 1950s and 1960s. Such recent theories include those focused on self-determination (Deci & Ryan, 1985b), self-efficacy (Bandura, 1997), flow (Csikszentmihalyi, 1990, 1993, 1997), expectancy-value (Eccles, 1983), and attribution (Weiner, 1985). These theories utilize an organismic approach, which focuses on social-cognitive aspects of human behavior.

Several aspects of these theories have been used to investigate motivation in music education, which are discussed in the following sections. Self-determination theory (SDT) serves as the theoretical focus for this study, and it contains elements of several sub-theories, including the basic psychological needs theory, organismic integration

theory, cognitive evaluation theory, and causality orientation theory. The essential components of the theory are presented in this chapter.

Self-determination Theory

Self-determination theory is founded in "a dialectical view which concerns the interaction between an active, integrating human nature and social contexts that either nurture or impede the organism's active nature" (Ryan & Deci, 2002, p. 6), with special emphasis on the environmental supports for an individual's sense of autonomy, competence, and relatedness (i.e., psychological needs), as explained by the basic needs theory, the organismic integration theory, and the cognitive evaluation theory (Hagger & Chatzisarantis, 2007). A review of the literature regarding psychological needs follows within this chapter, including literature from education, music, and other domains. The additional SDT subtheories are also reviewed, and they are represented within the psychological needs sections.

Basic Needs Theory

The basic needs theory focuses on the psychological needs of autonomy (internalized self-regulation), competence (ability to perform a task), and relatedness (feeling socially connected to other individuals and groups). The theory posits that satisfaction of these needs will "promote people's natural growth tendencies" (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004, p. 246), in contrast to the indirectly satisfying results of extrinsic goal pursuits. In this way, we not only consider the *level* of motivation (i.e., amount of motivation), but also the *orientation* (i.e., the type) of that motivation (Ryan & Deci, 2000a).

Healthy motivation orientations are fostered by social environments that provide supports for the basic psychological needs, and such an orientation is predicted to support "healthy functioning, whereas factors associated with need thwarting or conflict are predicted to be antagonistic" (Ryan & Deci, 2002, p. 6). Self-determination theory centers on the self and the attempt to make one's experiences whole, to feel authentically in charge of one's behaviors, and to grow (Ryan, 1995). Therefore, the self seeks out and engages in behaviors that it finds "intrinsically motivating… behaviors that are fun, enjoyable, and valuable as ends in and of themselves" (Kasser, 2002, p. 125).

Autonomy

Teachers have a variety of ways in which they teach and motivate their students, ranging from an autonomy-supportive style to a controlling style (Deci, Schwarts, Sheinman, & Ryan, 1981; Reeve, Bolt, & Cai, 1999). An autonomy-supportive style is characterized by teaching methods that focus on developing students' interest and self-regulated engagement in education. In contrast, a controlling style is characterized by teaching methods that focus on controlling students' behavior in ways that encourage desirable outcomes, while thwarting less-desirable ones (Reeve, Ryan, Deci, & Jang, 2007)

Autonomy-supportive environments have been linked to students' persistence and their overall intrinsic motivation (Black & Deci, 2000). The discussion about this relationship and about how controlling strategies undermine feelings of autonomy began when Deci (1971) found that if people were rewarded for engaging in enjoyable, fun activities, their likelihood of persistence in these activities was greatly reduced. The shift was due to the reward's effect on the person's perceived locus of causality. By presenting

an extrinsic reward for a task that was previously undertaken because of intrinsic motivation, the person shifts his or her reasons for doing the activity, and is likely to persist only in the presence of a continued extrinsic reward. Black and Deci (2000) later expanded on the research about autonomy support by studying student perceptions in a classroom context. They found that students reported having higher levels of competence if they perceived their teachers as being autonomy supportive.

Regulation

Autonomy support can be explained using elements of the organismic integration theory (OIT). OIT focuses on the different forms of extrinsic motivation and the contextual factors that either promote or hinder internalization and integration of the regulation for behaviors (Deci & Ryan, 1985b; Reeve et al., 2007; Ryan & Deci, 2000a), reflecting a person's level and type of autonomy. A person who is self-regulated, therefore, is considered to be functioning *autonomously*; while conversely, a person who is regulated without "self-endorsement" is considered to be functioning *heteronomously* (Ryan & Deci, 2006, p. 1557).

Regulation is considered to be the degree and manner in which a person is metacognitively, motivationally, and behaviorally active (Zimmerman & Schunk, 1989); and self-regulation refers to the "process by which learners personally activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of learning goals" (Schunk & Zimmerman, 2008, p. vii). Figure 2.1 depicts a range of regulatory styles and their relationship to locus of causality, intrinsic and extrinsic motivation categories, and examples of related processes.

	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Regulatory Styles	Non-regulation	External Regulation	Introjection	Identification	Integration	Internal Regulation
Associated Processes	Perceived non-contingence, low perceived competence, non-relevance, non-intentionality	Salience of extrinsic rewards or punishments, compliance or reactance	Ego-involvement, focus on approval from others	Conscious valuing of an activity, self-endorsement of goals	Hierarchical synthesis of goals, congruence	Interest and enjoyment, inherent satisfaction
Perceived Locus of Causality	None	External	→			Internal

Figure 2.1. A continuum of motivation (adapted from Ryan & Deci, 2000b).

Regulation and autonomy are salient concepts, since not all of the activities in which we participate are interesting to us. While Deci (1971) investigated the controlling effect of rewards and other external factors on motivation (i.e., moving from internal to external regulation), Reeve, Jang, Hardre, and Omura (2002) sought to determine whether externally driven behaviors could be shifted to become more self-determined through identification in experimenter-designed classroom language instruction. They found that extrinsically motivated behaviors could become self-determined by providing rationales to subjects that add to their identification with the task's personal value. Additionally, such identification was most successful when communicated in an autonomy-supportive manner. This type of information is considered to be a type of feedback from the environment. It provides information about how others view and value a specific task, shown here to have a positive influence on the subjects' shift from external to internal types of regulation (i.e., more self-determined behavior than before).

Role of Feedback in Supporting Autonomy

In many contexts, including education, feedback style plays a key role in autonomy perception (Deci, Spiegel, Ryan, Koestner, & Kauffman, 1982). Informational

feedback is meaningful feedback that provides some type of information that will help a person become more competent in specific task. Controlling feedback pressures people toward specific outcomes, which implies a sense of incompetence. Although feedback, in this sense, is viewed in terms of its effect on competence perception, the perception of who is in control of that competence becomes a concern for one's sense of autonomy.

Grolnick and Ryan (1987) demonstrated the difference between these feedback styles in their examination of controlling and non-controlling instructional contexts. They found that when students received non-controlling instruction (i.e., given informational feedback) or were non-directed (i.e., students controlled their own instruction), students reported less pressure and skill-deterioration than those who received controlling instruction (i.e., from teachers who used external incentives and pressure).

Cognitive Evaluation Theory

When teachers and parents attempt to motivate students, they often turn to rewards (Kohn, 1999). Although the purpose of using rewards is to try to get someone to do something that they otherwise would not do (i.e., a form of control), the results of research have fueled the debate over whether rewards contain the motivational nutriments needed to maximize engagement and develop intrinsic motivation. In other words, even though rewards can encourage someone to do something, a critical part of motivation is lost when certain types of rewards are used. In this way, rewards function as a type of feedback, which was previously described as having the potential to act in either autonomy-supportive or controlling ways.

Some consider Deci's (1971) findings, that extrinsic rewards can undermine intrinsic motivation, to be the catalyst of the discussion over the effects and

appropriateness of certain types of rewards. Deci and Ryan (1980) later developed the cognitive evaluation theory, which was initially created to explain the effects, both positive and negative, of rewards on intrinsic motivation. The discussion and research on the effects of rewards is important, because of the wealth of studies that show the significant undermining effects of tangible rewards on intrinsic motivation (Deci, Koestner, & Ryan, 1999, 2001). The difference between tangible rewards (i.e., extrinsic) and intangible rewards (i.e., intrinsic) is an important distinction, in that the extrinsic characteristics of rewards tends, in the long-run, to countermand the intended results of providing rewards in the first place.

Rewards and punishment have been used in education for many years, and as observed by Lewin (1935), are "a means of bringing about or suppressing certain definite behavior in the child" (p. 114). Lewin also writes about the importance of considering one's locus of causality, specifying that the effects of rewards and punishments are limited by "those cases in which the child actually experiences the reward as reward, the punishment as punishment" (p. 115), and that the "situation involving either reward or punishment is to be contrasted with that in which the behavior of the child is dominated by an original or derived interest in the thing itself" (p. 115).

Attribution theory. Attribution theory, originating from Heider's ideas (1958), is related to cognitive evaluation theory in that it considers the complexity of people's desire to view themselves as part of an ordered world. Making attributions is considered by some to be an intrinsically motivated process, since it "helps people master their environments and to feel a sense of competence and self-determination" (Deci & Ryan, 1985b, p. 190).

A person's perceived locus of causality (i.e., the belief that the cause of an outcome is generated from within or from outside oneself) is one of the key elements of attribution theory. A person with an internal locus of causality experiences their behavior as being self-determined, feeling as though they were the cause of the behavior (see Figure 2.1). The other dimensions of causality are concerned with the stability and controllability of an outcome.

Organismic Integration Theory

Self-determination theory is also concerned with the regulatory processes by which individuals operate, which is a closely related discussion to that on the causality of behavior. The organismic integration theory delineates between the developmental styles of regulation, ranging from external to internal types of regulation. The regulation section of this chapter introduced aspects of regulatory behaviors. However, explanation of the internalization process can be further explained from a developmental perspective. For example, the development of internalization begins at birth, when behavior is completely non-regulated. At first, infants experience an environment in which their needs are exclusively satisfied by their caregivers. Through the process of becoming increasingly active in a responsive environment, the initiation of internalization is possible (Ainsworth, Blehar, Waters, & Wall, 1978).

External regulation is a basic form of regulation that involves the action of external contingencies upon a person. A child, for example, may act in order to achieve praise or reward, or may act in order to avoid a punishment. Social rewards and contingencies, therefore, are catalysts of externally regulated behaviors.

As a child develops, behavior becomes more introjected. Introjected behavior maintains the former contingencies, but creates an internal representation, which guides behavior. It appears initially as self-control, but is only slightly more stable than external regulation, since it still relies on reference to forces outside oneself (i.e., self-worth contingencies or avoidance of embarrassment). Introjected behavior is not self-determined behavior, since an individual has not yet accepted the behavior as one's own, and approval from others is emphasized.

The next step toward internalization is identification. Identified self-regulation is an important step, since it recognizes that one values a particular behavioral outcome. A person begins to feel as though a particular outcome is important, and therefore, that there is social value in performing the behavior that leads to that outcome.

The final step toward internalization is integration. Integrated behavior is "the natural outcome of internalization that is not impeded or thwarted by environmental influences" (Deci & Ryan, 1985b, p. 138). At this stage, self-regulation is conflict-free and fully absorbed into one's regulatory schema.

Causality Orientations Theory

Deci (1980) developed the concept of causality orientations, in part by contextualizing some of the earlier ideas of Heider (1958) and deCharms (1968), and by proposing three orientations: internal, external, and impersonal. These orientations were renamed by Deci and Ryan (1985a) as autonomy, control, and impersonal, and they are meant to reflect the perceived locus of causality of behavior. For example, an autonomy orientation emphasizes a tendency to regulate one's behavior through informational cues from the environment (i.e., internal to one's sense of self), whereas a controlling

orientation emphasizes a tendency to regulate one's behavior through controlling cues from the environment (i.e., external to one's sense of self).

Autonomy orientation. A more complete discussion of autonomy orientation includes the idea that a person self-regulates in approach of self-selected goals (i.e., a person exercises choice). Autonomous orientation is not controlled by reinforcement contingencies, and refers instead to behavior in which a person experiences freedom with respect to an action (i.e., motivationally, rather than cognitively). They are self-determined.

Control orientation. The category of control orientation centers on the idea that a real sense of choice is missing, and that one would feel pressures to perform from outside the self. A person who operates with a control orientation behaves in ways that exemplify either compliant (i.e., passively accepting control) or defiant (i.e., acting on tension caused by lack of their own control) behaviors. In both cases, their behavior is not self-determined.

Impersonal orientation. Impersonal orientation refers to the belief that behavior and outcomes are independent and uncontrollable. Impersonal functioning is "erratic and nonintentional, for one does not have the necessary psychological structures for dealing with external and internal forces" (Deci & Ryan, 1985b, p. 159). A person who operates with impersonal orientation tends to lack the ability to cope with life's challenges, is amotivated, and attributes much of their life to fate or chance. They have learned to be helpless.

Autonomy Support in Education

In education, it is important to identify to what degree students regulate their behavior based upon extrinsic factors. Vallerand and Bissonnette (1992), for example, investigated the four types regulation that are contained in the spectrum of extrinsic motivation (see Figure 2.1), including external, introjected, identified, and integrated regulation. Ranging from externally- to internally-regulated, respectively, Vallerand and Bissonnette found that students that persisted had higher self-reports of internal regulation at the onset of a school course, and those who dropped out of the course had higher self-reports of external regulation at the onset of the course.

Similarly, Vansteenkiste, Simons, et al. (2004) found that providing autonomy-supportive learning climates, in conjunction with intrinsic goal constructs, can significantly increase students' dedication and engagement in learning activities. When teachers know about and try to increase the level of autonomy-support that they use in their classrooms, they can increase their students' engagement to the degree to which they make such changes to their teaching style (Reeve, Jang, Carrell, Jeon, & Barch, 2004).

Autonomy support has also been shown in research to improve aspects of education for future medical professionals. Medical educators have been concerned with teaching students to become more humanistic in their care of their patients. When educators are more supportive of student autonomy, medical students show a more humanistic approach to their patients, demonstrate greater conceptual understanding, and are more psychologically adjusted (Williams & Deci, 1998). Also, physicians whose

patients perceived them to be autonomy supportive have shown greater adherence to medical prescriptions (Williams, Rodin, Ryan, Grolnick, & Deci, 1995).

The effects of autonomy perception are not only felt in terms of autonomy support, but also in terms of reasons for undertaking an activity in the first place. In a college-level organic chemistry course, for example, Black and Deci (2000) examined the students' reasons for entering the course (i.e., autonomous versus controlled) and the students' perceptions of their instructors' autonomy support. They found that students that entered the course for autonomous reasons displayed higher perceived competence and interest/enjoyment and lower levels of anxiety and extrinsic goal orientation than those who entered for more controlled reasons. These students also were less likely to drop out of the course throughout the semester. Students who perceived that their instructors were autonomy-supportive experienced increased levels of autonomous self-regulation, perceived competence, and interest/enjoyment, in addition to a decrease in anxiety.

The Black and Deci (2000) study has possible implications in K-12 education, since it shows that there are differences in the academic outcomes when there are autonomous, versus controlling, reasons for undertaking coursework in school. When students engage in required coursework, therefore, there are different reasons for taking the course than if the student engages in elective coursework. There are many forces at work; including how the student regulates the experience, their perceived locus of causality, and the teacher's autonomy support (Reeve & Jang, 2006).

Teacher Autonomy. If autonomy is a key issue in student performance, one must consider the questions of how it is that a teacher becomes autonomy-supportive to their

students, and how teachers' autonomy perceptions in their instructional practice impact how they teach their students. Pelletier, Legault, and Séguin-Lévesque (2002) studied teacher autonomy in the K-12 context. They found that teachers became less self-determined toward teaching and more controlling with students when they perceived pressure from above (i.e., curriculum, colleagues, and performance standards) and from below (i.e., perceiving that their students were not self-determined). In other words, the more they felt pressured and controlled to produce a specific result, the more they pressured and controlled their students.

Pressure and control from above has received attention from the education community, especially concerning external testing programs (Boyle & Radocy, 1987). Having such a strong external foci can make many teachers feel as though they need to spend more instructional time on helping students meet the short-term goals for which there will be an external measure, than on "other objectives that might, in a teacher's opinion, better meet the needs of the particular students in his or her classroom" (p. 28).

Such testing pressure is paralleled in music education in the form of public performance, competitive outcomes, and other ways of proving to an external entity that one's class measures-up to expectations (see Thibeault, 2010). Many teachers feel that they need to prove the worth of their discipline to their colleagues, administrators, and community. Often, funding, scheduling flexibility, and other support are contingent on such proof.

External pressure need not be explicitly recognized or rational, however. In some cases, external pressure originates and is sustained by the perception of external expectations. In the band context, directors can lose sight of the intrinsic values of music

education, and may instead put pressure on their students in an attempt to avoid embarrassment or to gain perceived status among their colleagues. For these reasons, it is crucial to consider the role of autonomy perception in the band context.

Autonomy Research in Music Education

In a field that relies on enactive experiences, resulting from teacher-led activities that impart knowledge and skills on the students, it can be a difficult task of making sure that students are active agents in their own learning, are properly attributing their successes and failures, and are participating based upon internal, self-regulatory processes. Although there have been many studies of motivation and issues of autonomy involving students who participate in ensemble settings, most of the investigations have been done in isolation from the ensemble experience. Many studies, therefore, have been conducted in private lesson, individual practice, and isolated experimental settings. Since high school band exists within a social setting, it is an important to consider future studies that go beyond task-based analyses, and investigate how students view themselves as part of a system that involves the influences of other people.

Autonomy perception and control have been studied in several ways in music education. Research in this area includes investigations of internal and external attributions (Austin & Vispoel, 1998; Asmus, 1986; Legette, 1998; Schmidt, 1995), motivation orientation (Schmidt, 2005), goal structures (Austin, 1991; Smith, 2005), practice motivation and regulation (Austin & Berg, 2006; Miksza, 2006), autonomous versus controlling classroom contexts (Gaunt, 2008), perceptions of teacher feedback (Schmidt, 1989), private lessons (Mackworth-Young, 1990), and performance anxiety (Osborne & Kenny, 2008).

Researchers in music education have used aspects of attribution theory (Weiner, 1974, 1979) to investigate students' perceptions of internal and external reasons for behaviors and outcomes in the music context. For example, Austin and Vispoel (1998) investigated attribution beliefs of seventh-grade students in classroom music. They found a strong link between students' beliefs about their music ability and their self-concept and achievement test scores. These links were greatest when the students reflected upon past failures. Based upon their findings, Austin and Vispoel recommend that teachers encourage students to embrace factors that they (the students) can control (i.e., effort, persistence, strategy use), rather than focusing on factors that may be considered uncontrollable by some students (i.e., lack of ability, negative family influences).

In an investigation of the reasons for student successes and failures in music, Asmus (1986) studied students in grades four through twelve who were enrolled in instrumental, vocal, and general music courses. Students were asked to state reasons why they thought some students did well or did not do well in music. Asmus found that students tended to attribute success to stable, internal reasons, and they attributed failures more to unstable, external reasons. In a similar study of elementary, middle, and high school students enrolled in music classes, Legette (1998) also found that students tend to place more importance on ability and effort as causal attributions for success or failure. These are important findings, since they have implications for students' persistence. Students that are successful, for example, may expect to continue to succeed in the future if they attribute their success to ability and effort. Conversely, students that fail and attribute natural ability as the reason, may expect to fail continually in the future and disengage from the activity altogether.

Goal structures were investigated in the elementary band context by Austin (1991), who examined the effects of a competitive versus non-competitive goal structure on student achievement. The results of the study concluded that there was no significant difference between the achievement scores of the students in a group that were awarded for high judge scores at contest and those that were told that they would be rewarded just for doing their best job. Although the results were not significant, Austin notes that the scores for students in the non-competitive group were "equal to, if not better than, their competing peers" (p. 154), and suggests that this is in agreement with other research (e.g., Ames, 1984; Covington, 1984; Dweck, 1986) that has shown that competition may inhibit, rather than enhance, learning and performance.

Smith (2005) also studied goal orientations in college students and found that task goals and incremental goals were most highly related to student motivation and achievement. Smith's findings point to a potential benefit of encouraging students about their agency in the learning environment, and he suggests that students should be taught that everyone has musical potential and that everyone can improve with patience and practice. In other words, when goals are based upon controllable, incremental steps, students can enhance their motivation and achievement.

Regulatory behaviors in practice settings were investigated by Austin and Berg (2006), who studied the self-structured practice strategies of sixth-grade instrumentalists. They found that the quality of support in students' practice environment at home were associated with the quality of motivation and practice routines of the students. Students with autonomy-supportive home environments were more likely to show self-regulative motivation in practice sessions.

Other research demonstrates the role of autonomy beliefs in other areas of concern for musicians, such as private lessons and performance anxiety. As previously shown, literature in other areas of education demonstrates that the learning context and teacher can have an effect on students' perceptions of autonomous or controlling learning situations. Gaunt (2008) studied collegiate studio instructors' view of how certain music instruction contexts can thwart the development of autonomy and self-confidence in learning. The instructors reported that they often felt a tension between their goal to support autonomy in their students and their goal to transmit technical and musical skills, primarily through teacher-led activities. Although this study focused on the private lesson context, the ensemble context provides a similar challenge of concurrently providing autonomy support while simultaneously enriching a more traditional approach of transmitting skills from teacher to pupil.

Mackworth-Young (1990) also studied the types of interactions in private lessons that led to autonomous or controlling outcomes. An objective of this study was to test a conventional, teacher-directed style of lessons against a more pupil-directed learning opportunity. Mackworth-Young found that teachers' increased focus on pupil-directed learning with secondary school students resulted in increased enjoyment, interest, positive attitudes, motivation, and progress.

Osborne and Kenny (2008) studied the role of attribution in performance anxiety in secondary school students. The findings show that certain psychological factors are valuable predictors of performance anxiety. Related to the study of autonomy, the findings indicate that students who begin learning music in low-pressure performance situations and who are encouraged to give self-feedback about their experiences have less

anxiety and stress than others. This study suggests that by focusing on one's own feedback and control over a performance situation (i.e., increasing autonomy perception), students will likely experience less stress in music learning situations.

Competence

Teacher and environmental feedback not only has an impact on students' perceived autonomy, but it can have implications on students' feelings of competence. As will be discussed in the following section, these implications deal with how people view their ability to perform a specific task (Bandura, 1997), goal framing, level of ego-involvement (Vansteenkiste & Deci, 2003), and feelings of self-worth.

Performing Tasks Well

Bandura (1997) argued that people motivate themselves to produce a desired outcome given their capacity to alter their environment. Deci and Ryan (2000) summarized Bandura's proposal that "feeling competent to carry out behaviors that are instrumental for attaining desired outcomes is the central mechanism of human agency" (p. 256). In this manner, competence is coupled with autonomy in ways that are critical to developing self-determined behavior, through the construction of goals, persistence, and feelings of self-worth.

Goal Framing

The way in which we develop and frame our goals has an impact on our overall perceived experience (Vansteenkiste, Matos, Lens, & Soenens, 2006). An achievement goal framework, for example, focuses on the distinction between mastery goals and performance goals (Dweck, 1986; Nicholls, 1984). Mastery goals focus on the development of competence, and performance goals focus on the demonstration of

competence. Recent research also makes a distinction between approach and avoidance achievement goals (Pekrun, Maier, & Elliot, 2009), creating a *trichotomous* framework (Elliot & Harackiewicz, 1996) in which mastery goals, performance-approach goals, and performance-avoidance goals are addressed.

Ego-involvement

Our involvement style also impacts our experiences in several ways (Vansteenkiste & Deci, 2003). We are informed about our competence by the types of feedback that we receive through instruction, social connections, and rewards; thus helping to shape our task- or ego-involvement in a given task (deBruin, Rikers, & Schmidt, 2007). Ego- and task-involvement (i.e., why one performs the task) becomes an important consideration in understanding goal formation, and is similarly explained in terms of performance and mastery goal orientations. The difference in goal formation is how people frame their goals, based primarily upon comparisons with others, constructed by standards, or based upon achievement.

In each case, a primary concern is how students' successes or failures are framed. Students' behaviors are driven by a specific goal construct, and the results are evaluated by individuals' interpretation of the causation for the result. This is similar to the findings of Legette (1998), which were previously reported in the Autonomy section of this chapter. Researchers have found that the more intrinsic the goal, the more likely a person is to interpret a "win" or a "loss" in terms of a mastery goal, resulting from having a task-involved orientation to that task. Conversely, the more extrinsic the goal, the more likely a person is to interpret the results in terms of a performance goal, thus having an ego-involved orientation (Vansteenkiste & Deci, 2003).

Competence Beliefs in Music Education

Competence beliefs have also been studied in several ways in music education. Research in this area includes investigations of reactions to successes and failures (O'Neill & Sloboda, 1997), performance achievement (McCormick & McPherson, 2003; McPherson & McCormick, 2006), ego-involvement (Elliot & Church, 1997; Schmidt, 2005), social influences on achievement (McPherson, 2009), practice behaviors (Miksza, 2007), music teacher training (Mills, 2006), and task-specific beliefs about musical abilities (Wehr-Flowers, 2006).

O'Neill and Sloboda (1997) studied elementary music students' competence beliefs by setting up musical tasks in which students experienced either success or failure. They found those students who reported low confidence following a failure more often demonstrated helpless behavior than mastery behavior. This is an important finding for music teachers, since reinforcing confidence (i.e., supporting the psychological need of perceived competence) in students could be an important part of reducing helpless behavior and improving mastery behavior, effort, and persistence.

Competence beliefs are also often explored in studies of performance achievement in music education. McCormick and McPherson, for example, found in a series of studies (2003; McPherson & McCormick, 2006) that self-efficacy was a strong predictor of young musicians' performance examination results. Musical skill development has also been shown by MacNamara, Holmes, and Collins (2008) to have important relationships with psycho-behavioral factors. MacNamara, Holmes, and Collins investigated the role of competence beliefs in transitional periods of music development. They found that positive competence beliefs were strongly related to expert

musicians' ability to transition through key periods of skill development throughout their careers.

Social influences on achievement have also emerged as an important area in the study of competence beliefs. In a study of parent-child interactions, McPherson (2009) found that parents' beliefs are key contributors in shaping children's musical competence and achievement, identity, persistence, effort, and resilience.

Other approaches to competence have been explored by Schmidt (2005), who specifically investigated the role of ego and task orientation in the motivation of secondary school instrumental music students. Schmidt found that performance and effort ratings were strongly correlated with self-concept and intrinsic motivation. These findings were consistent with those of Elliot and Church (1997), who reported similar findings in a study of college students. A key implication of both studies for music education is that a reduction in intrinsic motivation and a move toward an ego orientation can turn students away from competitive environments.

Relatedness

Humans are social beings. They have the innate need to feel related to other individuals and to groups (Deci & Ryan, 2000). It is not surprising, therefore, that relationships with those around us have a significant influence on our amounts and types of motivation (e.g., McPherson, 2009). Relatedness has been studied at length, in terms of how relationships affect students' academic functioning.

Ryan, Stiller, and Lynch (1994), for example, found that students who reported that they "utilized no one when occupied with emotional and/or school concerns were likely to show poorer school adjustment, lower self-esteem, and lower identity

integration" (p. 245), which are instrumental in developing one's overall well-being. They also point to related findings about the negative effects of too much emotional independence and detachment (e.g., Ryan, 1993; Ryan & Lynch, 1989) and how interdependencies during adolescent development can have a positive impact (e.g., Hill & Holmbeck, 1986; Leaper et al., 1989).

Relatedness and Social Influences in Music Education

Relatedness has been studied in several ways in music education. For example, research in this area has included studies about the interactions of students with their classmates (St. John, 2006), the types of meaning that students express about their participation in music (Campbell, Connell, & Beegle, 2007), and the effects of parental support (McPherson, 2009) on students' effort, achievement, persistence, and resilience.

St. John (2006) found that students benefited from positive interactions and impressions of their relationships with their classmates. Students demonstrated how they used peers as sources of ideas, creativity, and enjoyment. St. John highlights possible implications for other music teaching contexts, suggesting that teachers can maximize learning experiences by communicating value for students' efforts, providing meaningful feedback, and promoting an experience that celebrates collaborative music-making.

In a study of adolescent music students, Campbell et al. (2007) found five themes in how students expressed meaning in music, including identity formation, emotional benefits, life benefits, social benefits, and impressions of school music programs and their teachers. Also, as previously discussed, McPherson (2009) found support for a motivation model that includes the positive influence of parental support in the motivation of music students.

These three studies represent a part of the social and relatedness research in music education. Studies in music education tend to focus on observable social behaviors of students, while others also focus on students' self-reports of their perceptions regarding the influence of social factors on their motivation. Hendricks (2009), for example, investigated student perceptions of peer, teacher, and guest conductor interactions in a study of motivation in a high school instrumental music festival environment. Hendricks found that influences such as vicarious experience, feedback style of the conductor, and interactions with other students were key factors in supporting students' competence beliefs and motivation in the social setting of the instrumental ensemble. Additional studies, which investigate the interaction of perceived autonomy and competence with relatedness and social influences, are needed.

Well-being

Well-being is one of the underlying concerns of self-determination theory, and has been the focus of studies and other writings in a variety of contexts. It is briefly included here as a means to highlight the spirit of self-determination theory as an approach that is primarily concerned with supporting a healthy motivation profile that contributes to an overall sense of well-being. As previously discussed, self-determination theory seeks to explain motivation in terms of the type of motivation, in addition to an amount of motivation. As such, SDT goes beyond a behavioral approach of whether or not an action took place, but also considers whether behaviors are accompanied by other perceptions that contribute to intrinsically-motivation, happy individuals.

Studies of well-being range from those in religion (Ryan, Rigby, & King, 1993) to culture (Chirkov, Ryan, & Willness, 2005; Ryan et al., 1999), emotions (Ryan,

LaGuardia, Solky-Butzel, Chirkov, & Kim, 2005), personality (Ryan & Frederick, 1997), physical health and diet (Vansteenkiste, Soenens, & Vandereycken, 2004), business (Vansteenkiste, Duriez, Simons, & Soenens, 2006), goal-attainment (Sheldon & Elliot, 1999; Sheldon, Ryan, Deci, & Kasser, 2004), sports and exercise (Gagné, Ryan, & Bargmann, 2003; Wilson & Rodgers, 2007), parenting (Assor, Roth, & Deci, 2004), relationships (Patrick, Knee, Canevello, & Lonsbary, 2007), education, and everyday life (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). SDT and previous research demonstrates that "an excessive focus on extrinsic relative to intrinsic life goals is associated with lower well-being, increased ill-being, and less socially adaptive functioning" (Vansteenkiste, Simons, Lens, Soenens, & Matos, 2005, p. 483). Self-determination theory is "concerned primarily with explicating the psychological processes that promote optimal functioning and health" (Deci & Ryan, 2000, p. 262), and the SDT constructs provide the theoretical basis upon which to study motivation in this study of high school band students.

CHAPTER 3: OVERALL RESEARCH METHOD AND DESIGN

The purpose of this chapter is to provide a preliminary overview of the design and implementation of this study, which employed a mixed methods approach. This study was conducted in two phases, consisting of (a) a questionnaire and (b) interviews. The design of this study, as shown in Figure 3.1, follows a sequential mixed design, in which "the conclusions based on the results of the first strand lead to the formulation of design components for the next strand" and "the final inferences are based on the results of both strands of the study" (Teddlie & Tashakkori, 2009, p. 153).

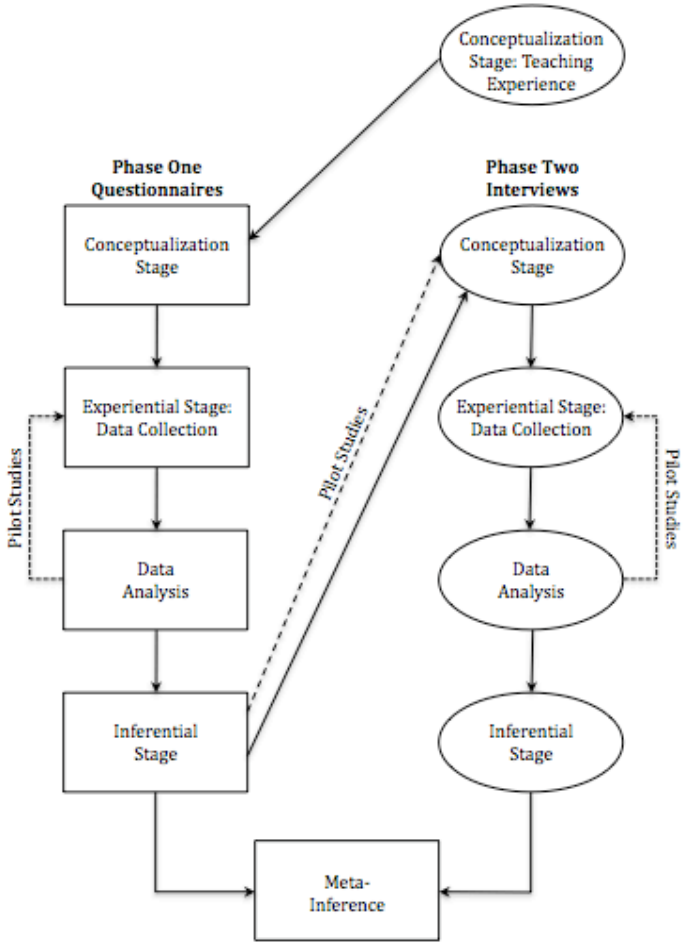

Figure 3.1. Sequential mixed-method design (adapted from Teddlie & Tashakkori, 2009).

The functions of the pilot studies for each phase are represented by dashed arrows in Figure 3.1, which indicate that the preliminary analysis of the pilot data influenced the restructuring of the questionnaire and the interview protocol for the main study. Also, inferences from the questionnaire pilot influenced the conceptualization and design of the pilot interviews, thus reflecting the sequential mixed method design. Specific methodological concerns related to each phase are discussed in greater detail in Chapter 4 (questionnaires) and Chapter 6 (interviews). The following sections provide a brief summary of each phase, including information about how the methods work together to address the purpose of the study.

Phase 1 Questionnaires

In Phase 1 of this study, questionnaires were used to collect information about high school band students' motivation profiles, as constructed by measures of their perceived psychological needs satisfaction, intrinsic motivation, types of self-regulation they employ while participating in band, and perceptions of their teachers' autonomy support. The questionnaires were completed by 380 high school band students in four iterations: a pre-pilot review, an initial pilot (n = 23), a full pilot (n = 83), and the main study (n = 274).

The questionnaire consisted of several sub-scales, which were adapted from their uses in previous research. Each of the questionnaire components is discussed in greater detail in Chapter 4. The data were analyzed using reliability, factor, correlation, and regression analyses, which provided the means to confirm, develop, and then report findings related to the theoretical model adopted in this study. The results were also used to choose subjects for the second phase of the study.

Phase 2 Interviews

In Phase 2, interview respondents were chosen based upon key aspects of their motivation profiles, as determined by the questionnaire data. Specifically, respondents' scores on the LSRQ were used, which allowed the selection of the three most intrinsically regulated and the three most extrinsically regulated students from the questionnaire sample. While the results of Phase 1 demonstrate how self-determination theory can be used to explain important motivation relationships in the band context, Phase 2 employed interview methods that allowed motivational beliefs of high school band students to be described from the subjects' own perspectives.

The purpose of collecting interview data was to seek areas of convergence (see Cook, 1985; Denzin, 1978) with the findings of the psychometric measures of self-determination, while enriching the story of how students' motivation profiles contribute to their interpretation of the high school band experience. Instances of divergent results (see Rossman & Wilson, 1985) were also examined, which provided opportunities to develop inferences that differed from those drawn from analysis of the quantitative data. This approach reflects a complementarity of purposes for mixing methods of inquiry. The questionnaires and interviews were used together to "elaborate, enhance, deepen, and broaden the overall interpretations and inferences" (Greene, 2007, p. 100), which might not be possible to accomplish through only one of the methods. This study draws on the combination of strengths that a generalizable, quantitative approach and a more situated, qualitative approach can provide.

PART II: PHASE 1 QUESTIONNAIRES

CHAPTER 4: QUESTIONNAIRE METHOD

The following chapter provides a description of the design and method used in the questionnaire phase of the study. It is divided into three main sections: (a) questionnaire content and structure, (b) initial development and modifications, and (c) a subsequent full pilot study, which influenced several additional modifications to the questionnaire prior to its use in the main study.

The Questionnaire

The questionnaire is divided into five main sections, which include adaptations of (a) the Basic Psychological Needs Scale, (b) the Intrinsic Motivation Inventory, (c) the Learning Self-Regulation Questionnaire, (d) the Learning Climate Questionnaire, and (e) questions about students' participation level and attitudes toward issues related to their participation in band. The piloted and main study versions of the questionnaire can be found in Appendix D. The following sections indicate the origin of each of the scales, including a description of how the scales have been used in past research and how the scales were adapted for use in this study. The original questionnaires, in addition to a wide variety of other scales related to self-determination research, are available online through the University of Rochester's Self-Determination Theory website (Deci & Ryan, 2008), and are approved by the authors for use in non-commercial research projects.

Basic Psychological Needs Scale

The Basic Psychological Needs Scale (BPNS) has been used in a variety of forms to measure perceived autonomy, competence, and relatedness, which are the psychological needs theorized to be essential to healthy and optimal human functioning (Deci & Ryan, 2000). Gagné (2003) used a 21-item version of the scale, which was

adapted from an earlier measure of need satisfaction at work (Ilardi, Leone, Kasser, & Ryan, 1993), to determine the extent to which the three basic psychological needs were generally satisfied in subjects' lives.

Baard, Deci, and Ryan (2004) used a 23-item version, called the Intrinsic Need Satisfaction (INS) scale, to measure the satisfaction of psychological needs in subjects' jobs. Baard et al. (2004) reported a reliability alpha of .87 for their study, which is consistent with Leone's (1995) alpha of .90 for the INS, in which intrinsic need satisfaction was correlated positively with work engagement, overall job satisfaction, and psychological adjustment. In a similar 21-item adaptation of the INS, Deci et al. (2001) explored the extent to which employees experienced satisfaction of their psychological needs. A shorter, 9-item version of the BPNS was used in a study about attachment, need fulfillment, and well-being (LaGuardia, Ryan, Couchman, & Deci, 2000), using three items each for autonomy, competence, and relatedness. LaGuardia et al. found their version to be highly reliable.

Versions of the BPNS have also been adapted for research in other domains. For example, the BPNS has been used in research in physical education and exercise (Vlachopoulos & Michailidou, 2006), in therapy with combat veterans (Kashdan, Julian, Merritt, & Uswatte, 2006), and in psychiatric vocational rehabilitation settings (Kasser, Davey, & Ryan, 1992).

Using the BPNS in the present study. The BPNS was used in this study to determine subjects' perceived psychological needs fulfillment in high school band. A 21-item version of the scale was used, including items for each of the subscales of autonomy, competence, and relatedness.

Autonomy dimension. This dimension of the BPNS focuses on students' perceptions of their autonomy, versus perceptions of being controlled. Table 4.1 displays the questions from the autonomy dimension of the BPNS, with the wordings used in the pilot studies. These items are related to choice, pressure, and freedom of expressing ideas in class. In this subscale, autonomy is considered as a functional autonomy; that is, an approach to autonomy that is primarily concerned with subjects' perception of having their behaviors controlled in the band environment. It is important to note that the autonomy subscale in the BPNS measures a conceptually different type of autonomy than that within the Learning Self-Regulation Questionnaire (LSRQ), which is described later in this chapter. The LSRQ measures autonomy as a type of regulatory autonomy; that is, an approach to autonomy that is primarily concerned with students' perceptions of the reasons for why they engage in certain behaviors in the band environment.

Table 4.1

Items from the Autonomy Dimension of the BPNS

Item	Text
A1	I feel like I am free to decide for myself how to participate in band
A2	**I feel pressured in band**
A3	I generally feel free to express my ideas and opinions in band
A4	**In band, I frequently have to do what I am told**
A5	People I interact with in band tend to take my feelings into consideration
A6	I feel like I can pretty much be myself in band
A7	**There is not much opportunity for me to decide for myself how to do things in band**

Note. The wordings of the items are shown as they appeared in the pilot studies. Reverse-scored items are shown in boldface.

A response of "*7-Very true"* on items such as "I feel like I am free to decide for myself how to participate in band" would demonstrate a high level of perceived autonomy (i.e., functional autonomy). In contrast, low scores on the autonomy dimension

of the BPNS would identify students that feel as though they have little agency in their activities in band, and those who perceive that they have limited free-choice in their involvement during band classes.

Competence dimension. The competence dimension of the BPNS focuses on students' perceptions of their abilities and accomplishments in band. Table 4.2 lists items from the competence dimension of the BPNS, with the wordings as they appeared in the pilot studies. This dimension includes items related to being good at band activities, being confident in learning new skills, and feeling a sense of accomplishment from participation in band.

Table 4.2

Items from the Competence Dimension of the BPNS

Item	Text
C1	**Often, I do not feel very competent in band**
C2	People I know tell me I am good at what I do in band
C3	I have been able to learn interesting new skills recently in band
C4	**In band, I do not get much of a chance to show how capable I am**
C5	Most days I feel a sense of accomplishment from what I do in band
C6	**I often do not feel very competent in band**

Note. The wordings of the items are shown as they appeared in the pilot studies. Reverse-scored items are shown in boldface.

A response of "*7-Very true"* to items such as "I often do not feel very capable in band" would demonstrate a student's low perception of their competence. This subscale measures students' perceptions of their acquisition of interesting skills, their abilities in band, and their perception of how others perceive their competence in band.

Relatedness dimension. This dimension of the BPNS indicates how socially-connected and valued students feel to their peers and other people in the band context. The items from the relatedness dimension of the BPNS are listed in Table 4.3, worded as

they appeared in the pilot studies. This dimension includes items that focus on whether students like those around them, whether they perceive that others like them, feeling close to others in band, experiencing the friendliness of others, and making positive social connections.

Table 4.3

Items from the Relatedness Dimension of the BPNS

Item	Text
R1	I really like the people I interact with in band
R2	I get along with people I come into contact with in band
R3	**I pretty much keep to myself and don't have a lot of social contacts in band**
R4	I consider the people I regularly interact with in band to be my friends
R5	People in band care about me
R6	**There are not many people I am close to in band**
R7	**The people I interact with in band do not seem to like me much**
R8	People are generally pretty friendly towards me in band

Note. The wordings of the items are shown as they appeared in the pilot studies. Reverse-scored items are shown in boldface.

A response of "*7-Very true"* for items such as "I get along with people I come into contact with in band" would indicate a high level of perceived relatedness with others. The relatedness subscale provides a sense of whether students are participating in learning activities in which they feel a strong interpersonal connection with those around them.

Calculating subscale scores for the BPNS. The bold items in the tables above are reverse-scored items, for which the scores need to be reversed by subtracting the scores from 8. The item scores are typically combined to represent a score on each subscale (i.e., anticipated factor) of the BPNS by calculating the mean of responses for questions within each anticipated factor. The mean scores represent the subjects' perceived level and type of motivation for each component that is represented by a subscale on the BPNS.

Intrinsic Motivation Inventory

Many studies have used the Intrinsic Motivation Inventory (IMI), or variations of it, to determine subjects' interest in a target activity (e.g., Deci, Eghari, Patrick, & Leone, 1994; McAuley, Duncan, & Tammen, 1989; Plant & Ryan, 1985; Ryan, 1982; Ryan, Connell, & Plant, 1990; Ryan, Koestner, & Deci, 1991; Ryan, Mims, & Koestner, 1983; Tsigilis & Theodosiou, 2003). First developed by Ryan (1982), the current IMI includes items that measure the four dimensions of interest-enjoyment, effort-importance, pressure-tension, and value-usefulness. Ryan used a 17-item version of the IMI to measure the effects of informational versus controlling feedback on intrinsic motivation. Through interpersonal feedback, self-administered feedback, and intrapersonal feedback, Ryan was able to use the IMI to determine if different forms of feedback had any effect on the subjects' intrinsic motivation to perform the target activity (i.e., puzzles).

Similarly, rewards were used by Ryan et al. (1983) in a study to determine their effect on intrinsic motivation in the same type of puzzle activity. A 7-point Likert scale was used to measure each of the four IMI dimensions. The IMI was later used by Plant and Ryan (1985) to measure intrinsic motivation following an activity, in order to determine whether ego-involved or task-involved induction (i.e., subjects received different descriptions of the target activity) had an effect on the subjects' intrinsic motivation.

The flexibility of the scale was highlighted by McAuley et al. (1989), who used the IMI to assess intrinsic motivation in a competitive basketball freethrow activity. The researchers acknowledged that although the full 27-item inventory is rarely used, an advantage of the IMI is the "malleability of the items, which can be easily modified to fit

a wide variety of activities" (McAuley et al., 1989, p. 49). Tsigilis and Theodosiou (2003) also created a Greek version of the IMI that was adapted for use in a physical endurance field test. Both McAuley et al. (1989) and Tsigilis and Theodosiou (2003) found strong support for the validity of the IMI.

Another adaptation of the IMI was used in a text learning study, in which a 16-item version was used (Ryan et al., 1990). Three items concerning reading comprehension were added to the inventory in order to assess items specific to the nature of the study. The IMI has also been adapted for use in research on ego-involved persistence (Ryan et al., 1991) and the facilitation of internalization (Deci et al., 1994). Ryan et al. (1991) studied the relationship between intrinsic motivation and ego involvement in free-choice activities in an introductory college psychology course. Deci et al. (1994) used a 25-item version of the IMI with subjects who were asked to complete a task that was believed to be boring, in order to determine the effect of control on intrinsic motivation.

Using the IMI in this study. The IMI was used in this study to determine the subjects' overall level of intrinsic motivation in band. This study utilized a 24-item version of the scale that included the subscales for (a) interest-enjoyment, a self-reported measure of intrinsic motivation; (b) perceived effort and importance, (c) perceived pressure and tension, a negative predictor of intrinsic motivation; and (d) perceived value and usefulness of band. The instructions for the IMI section of the survey were, "Please read each of the following items carefully, thinking about how it relates to your experiences in band, and then indicate how true it is for you. Use the following scale to

respond." Subjects were given seven possible response choices, ranging from *1-Not at all true* to *7-Very true.*

Interest-enjoyment dimension. The interest-enjoyment dimension of the IMI is the primary subscale that measures perceptions related to intrinsic motivation. The other subscales of the IMI perform supplementary roles to provide a more comprehensive picture of each subject's overall level of intrinsic motivation. The interest-enjoyment dimension of the IMI contains seven items. Table 4.4 displays the wording of each item that was used in the pilot studies.

Table 4.4

Items from the Interest-enjoyment Dimension of the IMI

Item	Text
I1	I enjoy being in band very much
I2	Band is fun to do
I3	**I think band is a boring activity**
I4	**Band does not hold my attention at all**
I5	I would describe band as very interesting
I6	I think that band is quite enjoyable
I7	When I am in band, I think about how much I enjoy it

Note. The wordings of the items are shown as they appeared in the pilot studies. Reverse-scored items are shown in boldface.

Effort-importance dimension. Table 4.5 displays the wording of each item that was used in the questionnaire pilots for the effort-importance dimension of the IMI. These items were included to measure students' perceptions of how much effort, energy, and importance they place on their participation in band.

Table 4.5

Items from the Effort-importance Dimension of the IMI

Item	Text
E1	I put a lot of effort into band
E2	**I don't try very hard to do well at band**
E3	I try very hard in band
E4	It is important to me to do well in band
E5	**I don't put much energy into band**

Note. The wordings of the items are shown as they appeared in the pilot studies. Reverse-scored items are shown in boldface.

Pressure-tension dimension. Table 4.6 displays the items of the pressure-tension dimension of the IMI. This dimension was included in order to measure students' perceptions of the pressure, anxiety, and nervousness that they feel in band. The results of this dimension were important in comparisons with previous research about the effects of pressure on intrinsic motivation and autonomous regulation.

Table 4.6

Items from the Pressure-tension Dimension of the IMI

Item	Text
P1	**I do not feel nervous at all while in band**
P2	I feel very tense while in band
P3	I am very relaxed in band
P4	**I am anxious while in band**
P5	**I feel pressured while in band**

Note. The wordings of the items are shown as they appeared in the pilot studies. Reverse-scored items are shown in boldface.

Value-usefulness dimension. Table 4.7 displays the items of the value-usefulness dimension of the IMI. This dimension was included in order to measure students' perceptions of the value of participating in band. These questions measured to what extent students perceived that band is useful to them, and whether band is something of value that can be useful to them in the future.

Table 4.7

Items from the Value-usefulness Dimension of the IMI

Item	Text
V1	I believe that band could be of some value to me
V2	I think that being in band is useful
V3	I think band is important
V4	I would be willing to be in band again because it has some value to me
V5	I think being in band could help me in the future
V6	I believe being in band could be beneficial to me
V7	I think band is an important activity

Note. The wordings of the items are shown as they appeared in the pilot studies.

Calculating subscale scores for the IMI. The item scores are typically combined to represent a composite score on each subscale of the IMI, which is calculated by using the mean of responses for questions within each factor. The mean scores represent the subjects' perceived level and type of motivation for each factor (i.e., those factors extracted in subsequent factor analyses) represented by a subscale on the IMI.

Learning Self-Regulation Questionnaire

First designed for used with elementary students (Ryan & Connell, 1989), the Learning Self-Regulation Questionnaire (LSRQ) results in separate scores for autonomous and controlled regulation, and then both scores are combined to determine a subject's score on the Relative Autonomy Index (RAI). Adaptations include versions for medical students (Williams & Deci, 1996), the study of autonomy support in an organic chemistry course (Black & Deci, 2000), and for studying regulatory behaviors in music students (Renwick, 2008).

Using the LSRQ in the present study. It is believed that autonomy support is positively related to needs satisfaction, which is positively related to both engagement

and self-esteem, and negatively related to anxiety (Deci, Ryan, et al., 2001). Therefore, one would expect that students with high Relative Autonomy Indexes (RAIs) would also have low levels of perceived pressure and tension, high levels of perceived psychological needs satisfaction, and high levels of engagement in music activities outside of school. Deci and Ryan (1985b) point to the importance of understanding regulation in relationship to motivational profiles and development, writing that "one can view regulatory styles as an issue of individual differences in children as well as an issue of development. The cross-sectional study of individual differences can help to shed light on the developmental process" (p. 140).

The items from the LSRQ are listed in Table 4.8, and the items are worded as they appeared in the pilot studies. These items focus on whether students' reasons for their behaviors in band are predominantly determined by autonomous or controlled regulation. As mentioned previously, the RAI measures perceived autonomy as a type of regulatory autonomy, which is conceptually different than the functional autonomy that is measured in the BPNS subscale for autonomy.

In the LSRQ, the items are presented in such a way that the subjects report how true each of the statements is for them. Some items in the LSRQ add to the subjects' score for controlled regulation, while others add to the subjects' score for autonomous regulation (as shown in Table 4.8). For example, if students answer "7-*Very true*" for questions such as "I participate actively in band because I feel like it's a good way to improve my understanding of the material," they are demonstrating an internal (i.e., autonomous) reason for their behavior. In contrast, if students answer "7-*Very true*" for

questions such as "I participate actively in band because others might think badly of me if I didn't," they are demonstrating an external (i.e., controlled) reason for their behavior.

Table 4.8

Learning Self-Regulation Questionnaire Items

Item	Text	Regulatory Style
	I participate actively in band:	
AR1	Because I feel like it's a good way to improve my understanding of the material.	A
CR1	Because others might think badly of me if I didn't.	C
CR2	Because I would feel proud of myself if I did well in the course.	C
AR2	Because a solid understanding of music is important to my intellectual growth.	A
	I am likely to follow my instructor's suggestions for studying and practicing music:	
CR3	Because I would get a bad grade if I didn't do what my instructor suggests.	C
CR4	Because I am worried that I am not going to perform well in the course.	C
CR5	Because it's easier to follow my instructor's suggestions than come up with my own practice strategies.	C
AR3	Because my instructor seems to have insight about how best to learn the material.	A
	The reason that I will work to expand my knowledge of music is:	
AR4	Because it's interesting to learn more in band.	A
AR5	Because it's a challenge to solve band-related musical problems.	A
CR6	Because a good grade in band will look positive on my record.	C
CR7	Because I want others to see that I am good at band.	C

Note. The wordings of the items are shown as they appeared in the pilot studies. A = Autonomous Regulation; C = Controlled Regulation. The boldface sections of text are the prompts (i.e., prefixes) for each subsection of items in the LSRQ.

There are 12 items on the LSRQ, which are noted in third column of Table 4.8 as contributing either to subjects' controlled regulation scores or to their autonomous regulation scores. A composite score, called the Relative Autonomy Index (RAI) is then calculated by subtracting the controlled regulation scores from the autonomous regulation scores. The higher the RAI, the more a person perceives their behaviors in band to be autonomously regulated.

In band, the RAI reflects under what type of regulation students feel they are operating in certain situations. The RAI shows whether the motivation for a group of behaviors is perceived to have been generated from within the student (i.e., intrinsic) or from outside of the student (i.e., extrinsic). For example, we would expect that a student who reports to be operating under a high level of autonomous regulation to be much more concerned with choosing behaviors based upon interest and intrinsic valuing of an activity, rather than external factors. We would expect that a student who reports to be operating under a high level of controlled regulation to be concerned with choosing behaviors based upon external contingencies, such as getting a good grade, avoiding embarrassment, or getting recognition.

Calculating subscale scores for the LSRQ. The item scores are typically combined to represent the each subject's separate scores for autonomy and for competence by calculating the mean of responses in each category (marked in Table 4.8 as either "C" for controlling or "A" for autonomous). The mean scores for the controlling category are then subtracted from the mean scores for the autonomous category, which determines the subject's Relative Autonomy Index (RAI) score. RAI scores can fall between -6 and +6, and high scores represent a high level of autonomous regulation. For example, if a subject had a score of 1.0 in the Controlled Regulation category and a score of 7.0 in the Autonomous Regulation category, their RAI would be 6.0, which is the most autonomous score a subject can receive on the RAI.

Learning Climate Questionnaire

The Learning Climate Questionnaire (LCQ) was originally designed for use in studies regarding perceived environmental supports for autonomy (e.g., Black & Deci,

2000; Williams & Deci, 1996; Williams, Saizow, Ross, & Deci, 1997). The LCQ was used in this study to measure students' perceptions of teacher autonomy support (POTAS).

Table 4.9 lists items from the LCQ, with the wording as they appeared in the pilot studies. This section of the survey includes items related to students' perceptions about how much consideration their teacher gives to each of their perspectives. Specific issues include student choice, the teacher's encouragement and support, thoughtful feedback, handling of student emotions, and trust in the teacher. The LCQ was added to the questionnaire after the initial pilot.

Table 4.9

Learning Climate Questionnaire Items

Item	Text
T1	I feel that my teacher provides me choices and options
T2	I feel understood by my teacher
T3	I am able to be open with my teacher during class
T4	My teacher conveyed confidence in my ability to do well in band
T5	I feel that my teacher accepts me
T6	My teacher makes sure I really understand the goals of band and what I need to do
T7	My teacher encourages me to ask questions
T8	I feel a lot of trust in my teacher
T9	My teacher answers my questions fully and carefully
T10	My teacher listens to how I would like to do things
T11	My teacher handles people's emotions very well
T12	I feel that my teacher cares about me as a person
T13	**I don't feel very good about the way my teacher talks to me**
T14	My teacher tries to understand how I see things before suggesting a new way to do things
T15	I feel able to share my feelings with my teacher

Note. The wordings of the items are shown as they appeared in the pilot studies. Boldface indicates a reverse-scored item.

Calculating subscale scores for the LCQ. The boldface item in Table 4.9 is a reverse-scored item, for which the score needs to be reversed by subtracting it from 8. All of the item scores are then combined to represent the score on the LCQ by calculating the

mean of the responses. The mean score represents the subjects' perception of teacher autonomy support.

Questions about Environmental and Instructional Influences

The questionnaire also contained general questions (e.g., year in school), questions about the students' participation in band (e.g., the types of ensembles they are in), and their attitudes towards certain aspects of their experience (e.g., family and peer support, reasons for being in band, and participation in music outside of school). These questions helped to interpret the individual scores on the survey, as well as guide the development of interview questions for Phase 2.

Initial Development and Modifications

Adaptations were made to the questionnaire components based upon their use in the band context. Additionally, previous psychometric research literature provided guidance about the appropriate number of response choices and ways of labeling scale points. Initial reviews of the questionnaire identified additional areas for improvement.

Psychometric Principles Applied to the Instruments

A 7-point Likert-type scale (Likert, 1932) was used in each of the questionnaire subscales, and short-answer and multiple-choice formats were used to collect additional information from the subjects. The phrase "in band" was added to items as appropriate to direct subjects to answer questions as they specifically relate to their experience in the band context. See Appendix D for the piloted version of the questionnaire.

Number of choices in the scales. The number of choices in each of the scales was kept consistent with the design of each of the original instruments. Prior research regarding survey methods has shown that the most reliable way to present uni-polar

scales (e.g., responses ranging from “never” to “always”), as opposed to bi-polar scales (e.g., responses ranging from “very negative” to “very positive”), is using 5- to 7-point scales (Alwin & Krosnick, 1991).

Labeling scale points. The endpoints and midpoints of each of the scales were labeled in order to clarify the relative meaning of points along the scales. Studies of scale reliability have indicated that labels can be helpful by improving clarity (Krosnick & Berent, 1993), and that it may be beneficial to label the endpoints of the scales in order to make the endpoints seem farther apart (Bendig, 1955). Scale validity has also been shown to improve with the use of verbal labels on the scales (Dickinson & Zellinger, 1980; Krosnick & Berent, 1993). Figure 4.1 shows the general format of the survey questions, including the number of choices available and the labels used throughout the survey.

Figure 4.1. Excerpt from the BPNS, showing the general format of survey items.

Pre-pilot and Initial Pilot

A pre-pilot review of the survey was completed by two university professors, two high school band directors, two graduate music education students, and three high school band students; a review which provided feedback about ways to improve the layout, length, and navigation of the online questionnaire instrument. Additional issues were also resolved, including improved access through a link to the survey website using a shortened URL that was generated on the *shortURL* website (shortURL, 2009), allowing a succinct URL to be provided so the subjects could type the address directly into their

web browsers. This service provided the flexibility of giving subjects simple web link on printout of the Survey Access Sheet (see Appendix C), avoiding the need to provide an electronic copy of a link on a CD, flash drive, email, or other electronic media.

Two more-extensive pilots were conducted: an initial pilot and a full pilot. The pilots of the survey demonstrated the need for changes to the implementation of the survey and to the contents of the survey itself. The purpose of the initial pilot was to (a) enact a logistical test of the recruitment process; (b) run a test of the questionnaire on the online survey platform, SurveyMonkey (2009); (c) to get specific feedback from students about the online questionnaire contents and process; and (d) to determine whether the questionnaire items were appropriate in terms of clarity, practicality (i.e., amount of time to take the survey), technical considerations (e.g., allowing the full use of the Likert-type scale), and in the collection and interpretation of the data. The purpose of the full pilot study was to refine the variables used in the questionnaire and to pilot the analysis procedures that were used in the main study. The results of the initial pilot follow within this section.

Initial pilot subjects and response rate. Twenty-three students from a high school band class of 40 students participated in the initial pilot study. The respondents (N = 23) represented a 57.5% response rate, which is considered "adequate for analysis and reporting" (Babbie, 1990, p. 182). Although the percentage may be adequate for analysis, the sample size in the full pilot and the main study were much larger, which allowed for a proper factor analysis to be conducted. Such a low response rate could have been due to (a) the way that students were given access information for the online survey, which they were allowed to complete on their own time; and (b) the format of the consent letters may

have discouraged students from participating, since they were not collected all together on a planned day.

Online platform. The SurveyMonkey platform was valuable in the collection of data for the pilot study. SurveyMonkey allows researchers to design, distribute, and collect data in a variety of formats. The pilot provided an opportunity to (a) test ways to best visually represent the questionnaire items; (b) determine the technical components of the questionnaire, such as time-limits, response requirements, usernames, passwords, and links to the survey website; (c) extract data, and (d) conduct preliminary analyses.

Student feedback on initial pilot. Students gave a variety of feedback about the survey. Much of the feedback was neutral, such as "no problems" and "ok," or positive, such as "this was an enjoyable time to reflect on my past experiences in the band" and "it was fairly easy and straight-forward for me." Constructive criticism from respondents included "I thought that the survey was a little redundant with asking if beneficial to life… it seemed to be repeating the question in different ways" and "many questions were rather repetitive."

Most comments regarding repetition were directed toward the section that asks students to respond to questions on the BPNS in terms of "life in general," in addition to responding to questions on the BPNS in terms of their "experiences in band." Additionally, a spelling error was detected and was communicated by a subject in the feedback section of the survey.

Modifications informed by initial pilot. After the initial pilot, several changes were made to the questionnaire. Changes included streamlining the informed consent process, eliminating questions, and correcting spelling errors that were detected by

participants. Additionally, the informed consent was amended to simplify the process. A new student letter and a parent letter were created (see Appendix B) and were approved by the university's Institutional Review Board (see Appendix A). The old student letter asked for consent to participate in the questionnaire and interview phases of the study. The revised student letter only asked for consent to participate in the questionnaire phase. Subsequent students who were asked to participate in the interview phase were required to sign an additional form that expressed their consent to participate in the interviews. Parental consent was separately acquired for participants in the interviews. Since only a small number of students were recruited to participate in Phase 2, it was a realistic expectation to be able to efficiently obtain separate consent for the interview phase. The new parent letter was also changed to include a section that could be signed and returned if they did not want their child to participate in the questionnaire. The objective was to decrease the paperwork burden on the students and their parents, to more clearly state the objectives of the survey phase of the study, and to attempt to increase the response rate.

Another change involved elimination of the BPNS section that dealt with subjects' life in general. This section was originally included to provide an opportunity to compare subjects' psychological needs satisfaction in general with their profiles in the domain of high school band. Although the BPNS played a large role in this study, such a comparison was not central to the focus of the study and was eliminated. As discussed in the Delimitations section of Chapter 1, the scope of this study is limited to motivation profiles in band.

Full Pilot

The initial pilot study demonstrated the need to make changes to the informed consent process, the length and content of the questionnaire, the wording of a few questions, and logistical aspects of conducting the questionnaire online. A more extensive pilot was then conducted to further refine the questionnaire contents and analysis procedures. The results of the full pilot are detailed in the following sections, which report the descriptive statistics, reliability test, factor analyses, and basic inter-factor relationships. Results of the analyses are reported, in addition to changes that further refine the data collection and analysis procedures.

Full Pilot Subjects

Subjects were recruited from a high school band program in a Midwestern state for the full pilot of the questionnaire. Of the 90 subjects who agreed to complete the online survey, 83 successfully completed the entire survey, which yielded a high response rate (92.2%) for analysis and reporting (Babbie, 1990). Seven incomplete questionnaires were categorized as non-responses and were removed prior to analysis because they were either not filled out at all ($n = 4$) or because they contained fewer than 5% of the total responses on the survey ($n = 3$). The results from this sample were combined with the results of the initial pilot study for reliability testing of the scales and to make comparisons between responses from the two sample populations.

The initial pilot study was conducted in a small, rural high school (RHS) with an enrollment of 350 students in grades nine through twelve, which is located in a Midwestern community of approximately 4,300 residents (U.S. Census Bureau, 2010). The full pilot study was conducted in a large, suburban high school (SHS) with an

enrollment of 2,000 students in grades nine through twelve, which is located in a Midwestern community of approximately 43,000 residents (U.S. Census Bureau, 2010).

Response Rate and Descriptive Statistics

The survey responses from both schools combined for a total of 106 of 140 eligible respondents and an overall response rate of 81.5%, which is also considered by Babbie (1990) to be a very good response rate for analysis and reporting. Information was collected on the questionnaire about the students' gender, grade level, years of experience, private lesson experience, and out-of-school musical involvement. The sample consisted of 55 females (51.9%) and 51 males (48.1%). Subjects included 34 freshmen (32.1%), 26 sophomores (24.5%), 29 juniors (27.4%), and 17 seniors (16.0%). Private lesson involvement was reported by 40 students (37.7%), and other out-of-school music performance involvement was reported by 51 students (51.9%). The mean number of years of experience in band was 5.83 (SD = 1.42).

Within-component Analysis of the Questionnaire Scales

Descriptive, factor, and reliability analyses were conducted on the results of the full pilot of the Phase 1 questionnaires. The purposes of these analyses were to (a) report the basic statistics that describe the nature of responses on each of the survey subscales, (b) test the responses for each subscale to confirm whether they load with other items in the same dimension using varimax rotation, (c) to determine which questions may need to be altered or removed from future versions of the survey, and (d) to confirm the factor analyses by conducting tests of inter-item consistency.

Analysis of the Basic Psychological Needs Scale results. As previously discussed in the explanation of the scales, the BPNS subscale scores were calculated by taking the

mean of all items for each dimension of the BPNS. Analysis of the subscale means for all subjects yielded the descriptive statistics for autonomy, competence, and relatedness, as shown in Table 4.10. These calculations demonstrated that the distributions of autonomy and competence were nearly normal, and the distribution of relatedness was negatively skewed to a greater degree than the other two subscale components.

Table 4.10

Descriptive Statistics of Responses on the BPNS Components

Subscale	Mean	SD	Skewness	Kurtosis
Autonomy	4.3383	.93990	-.257	.504
Competence	4.8713	1.12241	-.132	-.022
Relatedness	5.4822	1.19563	-.931	.651

The descriptive statistics in Table 4.10 were calculated under the assumption that the factor structure of the BPNS reflects a three-factor scale for measuring perceptions of autonomy, competence, and relatedness. Therefore, a confirmatory factor analysis was conducted to determine how well the scale items loaded onto each factor. The results indicated that there were some problems with a few of the questions on the subscales, which were reflected in the subsequent investigation of the components through factor analysis and reliability testing of each subscale.

Autonomy dimension. A confirmatory factor analysis was conducted on the autonomy subscale scores. The loadings in Table 4.11 indicate the strength of the relationship of each scale item to the autonomy factor. Items A2 and A4 show almost no relationship to the autonomy factor. One possible explanation could be that some students misread the text or the scale for these two questions, since both are reverse-scored items.

Table 4.11

Factor Loadings for Confirmatory Factor Analysis of Autonomy Dimension

Item	Text	Loadings
A1	I feel like I am free to decide for myself how to participate in band	.675
A2	I feel pressured in band	-.033
A3	I generally feel free to express my ideas and opinions in band	.623
A4	In band, I frequently have to do what I am told	-.055
A5	People I interact with in band tend to take my feelings into consideration	.501
A6	I feel like I can pretty much be myself in band	.381
A7	There is not much opportunity for me to decide for myself how to do things in band	.587

To further examine the impact of each question on the reliability of the autonomy subscale, a reliability test was conducted. The reliability of the autonomy subscale of the BPNS was moderately high ($\alpha = .501$). As shown in Table 4.11, the factor loadings for autonomy demonstrated that items A2 and A4 did not load on the autonomy factor. The reliability test confirmed that the reliability could be improved by eliminating the two items from the subscale, which were reverse-scored items. Table 4.12 shows the results of that test.

Table 4.12

Reliability Statistics of the Autonomy Subscale

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
A1	25.3113	31.702	.436	.330	.380
A2	27.4434	39.697	-.028	.055	.584
A3	25.5000	29.662	.462	.318	.355
A4	27.1981	42.122	-.092	.134	.591
A5	26.3962	33.708	.273	.304	.449
A6	24.7642	32.563	.370	.181	.408
A7	25.5943	31.539	.390	.296	.395

With items A2 and A4 deleted, the reliability was still not adequate (α = .686). Some of the items needed therefore to be altered to ensure that they truly encapsulated the nature of the autonomy factor as intended in the BPNS. Table 4.13 shows the results of a reliability test with items A2 and A4 deleted from the scale.

Table 4.13

Reliability Statistics of the Autonomy Subscale Without Items A2 and A4

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
A1	19.2170	25.733	.513	.324	.605
A3	19.4057	24.072	.521	.302	.598
A5	20.3019	26.251	.413	.211	.648
A6	18.6698	28.642	.315	.142	.686
A7	19.5000	25.833	.445	.292	.633

Competence dimension. A confirmatory factor analysis was conducted on the competence subscale scores. The loadings in Table 4.14 indicate the strength of the relationship of each scale item to the competence factor. Item C1 had a low loading, and is also a reverse-scored item, which may have been misread by students.

Table 4.14

Factor Loadings for Confirmatory Factor Analysis of Competence Dimension

Item	Text	Loadings
C1	Often, I do not feel very competent in band	.197
C2	People I know tell me I am good at what I do in band	.308
C3	I have been able to learn interesting new skills recently in band	.819
C4	In band, I do not get much of a chance to show how capable I am	.814
C5	Most days I feel a sense of accomplishment from what I do in band	.450
C6	I often do not feel very competent in band	.488

A reliability test was conducted to further examine the impact of each question on the reliability of the competence subscale. The inter-item consistency of the competence subscale of the BPNS ($\alpha = .697$) approached the .700 level, which is considered acceptable (George & Mallory, 2003), but would be improved to .708 if item C1 were deleted, as shown in Table 4.15. Two of the four lowest loadings correspond to reverse-scored items, which also demonstrated a negative effect on the subscale reliability.

Table 4.15

Reliability Statistics of the Competence Subscale

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
C1	23.8585	36.694	.261	.161	.708
C2	24.1226	34.490	.358	.212	.680
C3	24.9528	30.636	.569	.524	.609
C4	25.1226	29.575	.554	.504	.611
C5	24.7830	34.229	.338	.192	.688
C6	23.2925	34.723	.542	.346	.634

Relatedness dimension. A confirmatory factor analysis was conducted on the relatedness subscale scores. The loadings in Table 4.16 indicate the strength of the relationship of each scale item to the relatedness factor. Most loadings were moderately high, but they also showed that the three lowest loadings were for the three reverse-scored items (viz., items R3, R6, and R7). To further examine the impact of each question on the inter-item consistency of the relatedness subscale, a reliability test was conducted. The relatedness subscale was found to be highly reliable ($\alpha = .883$). Table 4.17 shows that although the factor loadings were lower for items R3, R6, and R7, the reliability of the scale would not be improved by deleting any of the three items separately.

Table 4.16

Factor Loadings for Confirmatory Factor Analysis of Relatedness Dimension

Item	Text	Loadings
R1	I really like the people I interact with in band	.787
R2	I get along with people I come into contact with in band	.725
R3	I pretty much keep to myself and don't have a lot of social contacts in band	.593
R4	I consider the people I regularly interact with in band to be my friends	.800
R5	People in band care about me	.746
R6	There are not many people I am close to in band	.667
R7	The people I interact with in band do not seem to like me much	.599
R8	People are generally pretty friendly towards me in band	.689

Table 4.17

Reliability Statistics of the Relatedness Subscale

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
R1	38.3774	70.028	.710	.615	.862
R2	38.0283	75.380	.654	.552	.869
R3	37.9057	73.267	.578	.445	.877
R4	38.1132	70.539	.739	.634	.859
R5	38.6321	71.187	.695	.533	.864
R6	38.7264	69.305	.646	.494	.871
R7	37.7925	78.147	.571	.518	.876
R8	37.9811	77.162	.652	.581	.870

Analysis of the Intrinsic Motivation Inventory results. As previously discussed in the explanation of the scale components, the IMI subscale scores were calculated using the mean of all items for each dimension of the IMI. Analysis of the subscale means for all subjects yielded composite scores for interest-enjoyment, effort-importance, pressure-tension, and value-usefulness, which are summarized in Table 4.18.

Table 4.18

Descriptive Statistics of Responses on the IMI Components

Subscale	Mean	SD	Skewness	Kurtosis
Interest-enjoyment	4.9442	1.53287	-.387	-.665
Effort-importance	4.7151	1.38810	-.278	-.581
Pressure-tension	2.7132	1.34236	.198	-1.286
Value-usefulness	5.4987	1.42194	-.778	-.139

The descriptive statistics in Table 4.18 were calculated based on the assumption that the factor structure of the IMI would reflect a four-factor scale for measuring perceptions of the four dimensions of intrinsic motivation. Therefore, a confirmatory factor analysis was conducted to determine how well the scale items loaded onto each factor. The results indicated that four factors loaded with eigenvalues greater than one, representing the four factors on the IMI.

The results indicated that the factors loaded well overall. However, there were some problems with a few questions on the subscales, which were further investigated by a factor analysis and reliability test of each subscale. For example, the factor loadings for the effort-importance and value-usefulness subscales also demonstrated high cross-loadings with the interest-enjoyment factor, resulting in a two-factor result of the scree test (see Figure 4.2). This demonstrated a strong relationship between the items and multiple factors, and could have been due to structural relationships within the motivation model adopted in this scale. Additional within-component analysis was conducted to determine the suitability of the items to each of the four factors, and subsequent between-component analysis was used to determine whether there was significant correlation between the three cross-loading factors. These components are included in the IMI

because of their contribution to our understanding of subjects' intrinsic motivation. It is therefore reasonable to expect that these three factors would act in this way and that pressure-tension would load independently on its own factor.

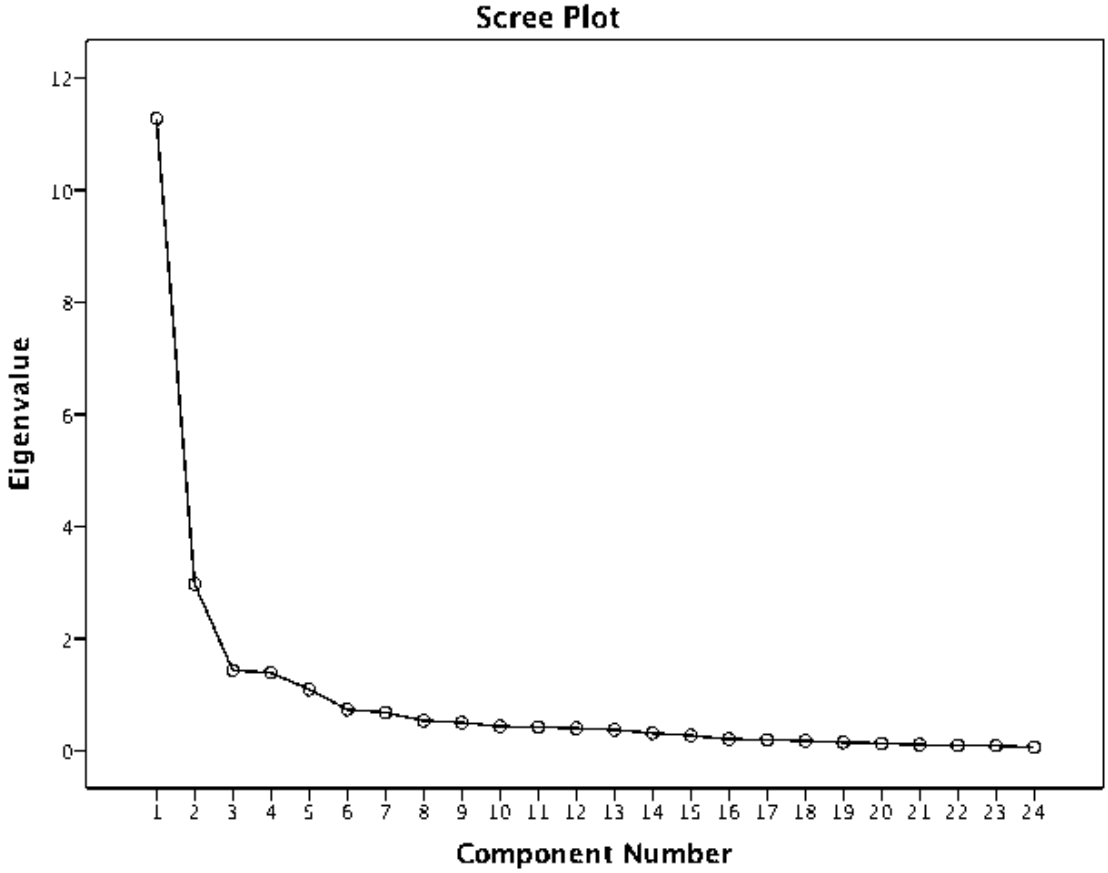

Figure 4.2. Scree plot of eigenvalues from factor analysis of the IMI

Interest-enjoyment dimension. A confirmatory factor analysis was conducted on the interest-enjoyment subscale scores. The loadings in Table 4.19 indicate the strength of the relationship of each scale item to the interest-enjoyment factor. The loadings all demonstrated strong relationships to the component factor.

Table 4.19

Factor Loadings for Confirmatory Factor Analysis of Interest-enjoyment Dimension

Item	Text	Loadings
I1	I enjoy being in band very much	.864
I2	Band is fun to do	.911
I3	I think band is a boring activity	.797
I4	Band does not hold my attention at all	.708
I5	I would describe band as very interesting	.865
I6	I think that band is quite enjoyable	.899
I7	When I am in band, I think about how much I enjoy it	.758

Similarly to the BPNS subscale loadings, the reverse-scored items loaded consistently lower than the other items. In the interest-enjoyment subscale, two of the three lowest loadings were reverse-scored items. Although items I3 and I4 loaded lower than the other items on the subscale, their loadings were still high, and they did not negatively affect the reliability of the subscale. The overall reliability of the interest-enjoyment subscale of the IMI was high ($\alpha = .937$). Table 4.20 shows the effect of each item on the overall reliability.

Table 4.20

Reliability Statistics of the Interest-enjoyment Subscale

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I1	29.5283	83.852	.843	.740	.923
I2	29.3396	85.788	.866	.786	.922
I3	29.2075	88.585	.776	.680	.930
I4	29.4057	88.320	.691	.530	.937
I5	29.9340	82.253	.839	.719	.923
I6	29.5094	84.652	.859	.782	.922
I7	30.7547	85.063	.718	.593	.936

Effort-importance dimension. A confirmatory factor analysis was conducted on the effort-importance subscale scores. The loadings in Table 4.21 indicate the strength of the relationship of each scale item to the effort-importance factor. The loadings all demonstrate strong relationships to the component factor, with the notable exception of item E5. As has been the case in previous subscales, the two lowest-loading items were for the two reverse-scored items.

Table 4.21

Factor Loadings for Confirmatory Factor Analysis of Effort-importance Dimension

Item	Text	Loadings
E1	I put a lot of effort into band	.903
E2	I don't try very had to do well at band	.530
E3	I try very hard in band	.893
E4	It is important to me to do well in band	.790
E5	I don't put much energy into band	.188

The overall inter-item consistency of the effort-importance subscale of the IMI was adequate ($\alpha = .773$), and would improve to .855 if item E5 were deleted. Table 4.22 shows the effect of each item on the overall reliability of the effort-importance subscale.

Table 4.22

Reliability Statistics of the Effort-importance Subscale

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
E1	18.9623	29.084	.741	.721	.660
E2	18.6415	34.308	.470	.336	.756
E3	19.1321	28.306	.759	.728	.651
E4	18.4340	32.172	.687	.575	.689
E5	19.1321	39.030	.181	.049	.855

Pressure-tension dimension. A confirmatory factor analysis was conducted on the pressure-tension subscale scores. The loadings in Table 4.23 indicate the strength of the relationship of each scale item to the pressure-tension factor. The loadings demonstrated a variety of low and high relationships to the pressure-tension factor.

Table 4.23

Factor Loadings for Confirmatory Factor Analysis of Pressure-tension Dimension

Item	Text	Loadings
P1	I do not feel nervous at all while in band	.233
P2	I feel very tense while in band	.932
P3	I am very relaxed in band	.811
P4	I am anxious while in band	.652
P5	I feel pressured while in band	.326

A reliability test of the pressure-tension subscale indicates that the inter-item consistency was adequate ($\alpha = .744$), and the reliability would be improved to .766 if item P1 were deleted or would stay the same at .744 if item P5 were deleted (see Table 4.24). If items P1 and P5 were both deleted, the reliability would be improved to .837, as shown in Table 4.25.

Table 4.24

Reliability Statistics of the Pressure-tension Subscale

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
P1	10.8868	34.692	.313	.174	.766
P2	10.8679	26.668	.693	.650	.622
P3	10.4906	27.548	.629	.584	.649
P4	10.8208	29.901	.547	.386	.684
P5	11.1981	34.579	.371	.208	.744

Table 4.25

Reliability Statistics for the Pressure-tension Subscale Without Items P1 and P5

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
P2	5.8208	11.844	.785	.637	.685
P3	5.4434	12.382	.716	.580	.756
P4	5.7736	14.291	.603	.379	.862

Value-usefulness dimension. A confirmatory factor analysis was conducted on the value-usefulness subscale scores. The loadings in Table 4.26 indicate the strength of the relationship of each scale item to the value-usefulness factor. The loadings demonstrated consistently strong relationships between each item and the value-usefulness factor.

Table 4.26

Factor Loadings for Confirmatory Factor Analysis of Value-usefulness Dimension

Item	Text	Loadings
V1	I believe that band could be of some value to me	.742
V2	I think that being in band is useful	.858
V3	I think band is important	.874
V4	I would be willing to be in band again because it has some value to me	.832
V5	I think being in band could help me in the future	.861
V6	I believe being in band could be beneficial to me	.874
V7	I think band is an important activity	.877

A reliability test of the value-usefulness subscale indicated that the inter-item consistency was high ($\alpha = .945$). Table 4.27 shows the relationship of each item to the overall reliability for the value-usefulness subscale. Removing any item from the scale would decrease the scale's reliability, with the exception of removing item V1, which would have no effect on the scale's reliability.

Table 4.27

Reliability Statistics of the Value-usefulness Subscale

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
V1	32.9245	76.642	.721	.621	.945
V2	33.1226	72.509	.829	.706	.936
V3	33.2547	70.020	.840	.806	.935
V4	32.7642	76.277	.812	.671	.938
V5	32.9151	73.297	.834	.729	.935
V6	32.7736	73.624	.860	.766	.933
V7	33.1887	71.774	.839	.822	.935

Analysis of the Learning Self Regulation Questionnaire results. As previously discussed, the subjects' scores for the LSRQ were calculated by subtracting the mean of the CR items from the mean of the AR items, which resulted in a number representing the RAI. Descriptive statistics for the LSRQ are shown in Table 4.28.

Table 4.28

Descriptive Statistics of Responses on the LSRQ

Subscale	Mean	SD	Skewness	Kurtosis
AR	4.781	1.606	-.458	-.733
CR	3.744	1088	-.072	-.244
RAI	1.037	1.455	.031	-.506

A confirmatory factor analysis was conducted on the LSRQ responses to determine whether the items would load onto two factors as expected. Three factors loaded with eigenvalues above 1, and the first two factors combined to explain 52.3% of variance. A factor analysis was then conducted on two factors. The results are shown in Table 4.29.

Table 4.29

Factor Loadings for Confirmatory Factor Analysis of LSRQ Subscale

Item	Text	Loadings	
	I participate actively in band:	AR	CR
AR1	Because I feel like it's a good way to improve my understanding of the material.	.925	
CR1	Because others might think badly of me if I didn't.		.169
CR2	Because I would feel proud of myself if I did well in the course.	.709	
AR2	Because a solid understanding of music is important to my intellectual growth.	.882	
	I am likely to follow my instructor's suggestions for studying and practicing music:		
CR3	Because I would get a bad grade if I didn't do what my instructor suggests.		.466
CR4	Because I am worried that I am not going to perform well in the course.		.612
CR5	Because it's easier to follow my instructor's suggestions than come up with my own practice strategies.	.357	.398
AR3	Because my instructor seems to have insight about how best to learn the material.	.545	
	The reason that I will work to expand my knowledge of music is:		
AR4	Because it's interesting to learn more in band.	.787	
AR5	Because it's a challenge to solve band-related musical problems.	.715	
CR6	Because a good grade in band will look positive on my record.		.380
CR7	Because I want others to see that I am good at band.	.525	.342

Note. The wordings of the items are shown as they appeared in the pilot studies. The boldface sections of text were the prompts for each subsection of the LSRQ. Loadings greater than .300 are shown, except for item CR1, for which .169 represents the highest loading between the two factors for that item.

Autonomous regulation. The reliability of the autonomous regulation items was strong (α = .874), and reliability would be improved to .900 if item AR3 were deleted, as shown in Table 4.30. Another reliability test was conducted to see if the reliability would improve by adding items CR2 and CR7 to the subscale, since they both loaded higher on the autonomous regulation factor than on the controlled regulation factor. By adding the two factors, singularly and in combination, the Cronbach's alpha improved slightly over the .874 for the AR subscale by adding CR2 (.887); improved slightly by adding both

CR2 and CR7; and decreased slightly by adding only CR7 (.862). Adding CR2 had negligible effect on the reliability when AR3 was removed (.902).

Table 4.30

Reliability Statistics of the Autonomous Regulation Subscale

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
AR1	18.8774	41.290	.847	.776	.815
AR2	18.7830	40.667	.776	.733	.829
AR3	19.4340	46.838	.480	.355	.900
AR4	18.8491	41.482	.773	.616	.830
AR5	19.6792	42.449	.672	.553	.855

When considering the factor loadings for autonomous regulation, it was important to consider whether CR2 ("I participate actively in band because I would feel proud of myself if I did well in the course") was acting as an indicator of autonomous regulation. This item is conceivably more autonomous (loaded at .709) than controlling (loaded at .126). Although pride is partially based on peoples' view of themselves as others might see them, pride also has an element of personal fulfillment of goals and satisfaction. Item CR7 ("the reason that I will work to expand my knowledge of music is because I want others to see that I am good at band") also relates to pride, but is more explicitly controlling than item CR2. Although item CR7 loaded on the autonomous regulation factor (.525), it loaded much higher on the controlling regulation factor (.342) than CR2 (.126).

For the purpose of the pilot study, the inter-factor analyses were conducted using the autonomous regulation subscale as originally designed, since the reliability would be highest without adding CR2 or CR7 to the AR subscale. Analysis of the AR and CR

subscales in the main study yielded additional information about the suitability of each item, thus informing the decision about whether or not to retain items for the multiple regression analysis and construction of the final summary model.

Prior to the main study, it was necessary to look more closely at the items in this subscale to determine whether there were words that could be interpreted in multiple ways by students in the band context. For example, the word "perform" may mean to play one's instrument, but also may refer to one's success in the course overall. Specific changes are described in the Discussion and Modifications Made to the Questionnaire section of this chapter.

Controlled regulation. The reliability of the controlled regulation items was acceptable, but not high (α = .649). Although the reliability would be improved to .663 if item CR1 were deleted as shown in Table 4.31, additional adjustments to the items were considered in order to ensure acceptable reliability of the items. Items CR1, CR2, CR6, and CR7 had the lowest loadings on the CR factor, and they were potential candidates for alteration.

Table 4.31

Reliability Statistics of the Controlled Regulation Subscale

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
CR1	24.3302	52.623	.149	.093	.663
CR2	21.2075	44.985	.359	.321	.612
CR3	23.0943	44.848	.315	.205	.627
CR4	23.3019	43.870	.429	.245	.591
CR5	22.5472	45.545	.319	.193	.625
CR6	20.9623	42.970	.431	.260	.589
CR7	21.8019	41.094	.494	.318	.567

Analysis of the Learning Climate Questionnaire results. As previously discussed, the subjects' scores on the LCQ were determined by calculating the mean score of all items on the scale for each subject. Descriptive statistics of the LCQ depict a nearly normal distribution ($M = 4.14$, $SD = 1.37$, Skewness = -.16, Kurtosis = -.19).

Factor loading and reliability. A factor analysis was conducted on the LCQ results to examine how many factors loaded with an eigenvalue greater than 1. Two factors loaded: the first with an eigenvalue of 8.577, and the second with an eigenvalue of 1.368. Although two factors had eigenvalues greater than 1, a scree test (Cattell, 1966) showed that the slope of the scree plot of eigenvalues (Figure 4.3) between Factors 1 and 3 changed dramatically at Factor 2. This means that Factor 1 could be considered to be the principal factor in this subscale, which is an acceptable conclusion when the sample size is large and factors have several variables with high loadings (Gorush, 1983).

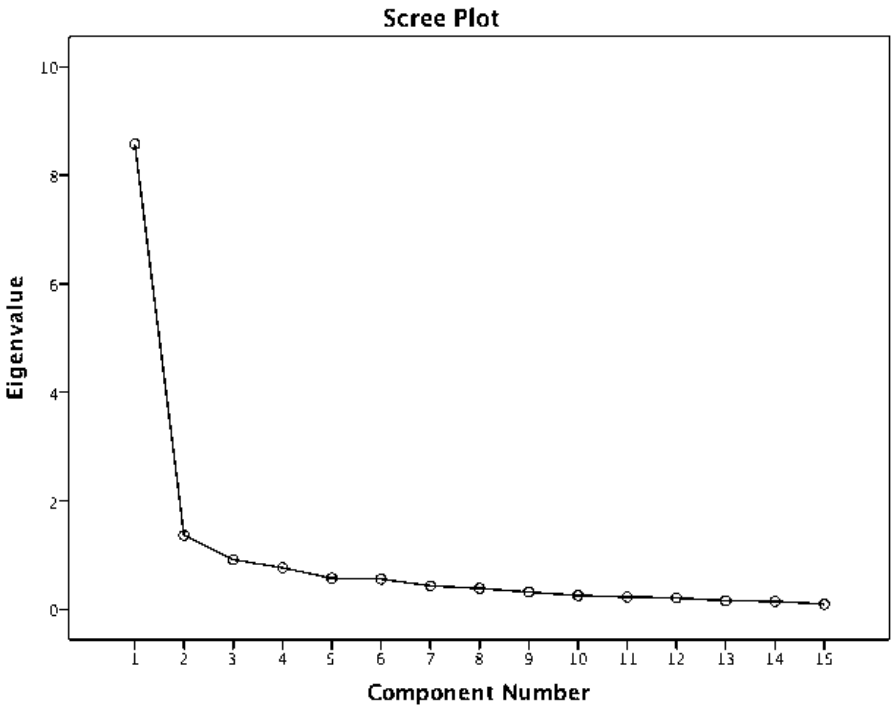

Figure 4.3. Scree plot of eigenvalues from factor analysis of the LCQ.

A follow-up factor analysis was conducted to extract one factor, using the maximum likelihood technique. The factor loadings for the LCQ are shown in Table 4.32, and they demonstrate high correlations with the extracted factor (i.e., Perception of Teacher Autonomy Support). One notable exception to the high loadings was a considerably low loading (.164) for item T13, which corresponded to generally low loadings on reverse-scored items on other subscales on the questionnaire. As previously mentioned, this could be because subjects misread these items by not correctly interpreting that they were stated in a negative manner.

Table 4.32

Factor Loadings for Confirmatory Factor Analysis of LCQ Scale

Item	Text	Loadings
T1	I feel that my teacher provides me choices and options	.839
T2	I feel understood by my teacher	.779
T3	I am able to be open with my teacher during class	.597
T4	My teacher conveyed confidence in my ability to do well in band	.645
T5	I feel that my teacher accepts me	.717
T6	My teacher makes sure I really understand the goals of band and what I need to do	.720
T7	My teacher encourages me to ask questions	.766
T8	I feel a lot of trust in my teacher	.868
T9	My teacher answers my questions fully and carefully	.833
T10	My teacher listens to how I would like to do things	.813
T11	My teacher handles people's emotions very well	.812
T12	I feel that my teacher cares about me as a person	.751
T13	I don't feel very good about the way my teacher talks to me	.164
T14	My teacher tries to understand how I see things before suggesting a new way to do things	.794
T15	I feel able to share my feelings with my teacher	.681

A reliability test was then conducted to determine the suitability of each item, and the reliability for the perception of teacher autonomy support (POTAS) on the LCQ was found to be strong ($\alpha = .943$). The reliability would improve slightly to .950 if item T13

were deleted, which corroborates the factor analysis. The reliability statistics for the LCQ are shown in Table 4.33.

Table 4.33

Reliability Statistics of the LCQ Scale

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
T1	61.2588	388.956	.801	.760	.936
T2	60.9765	388.047	.783	.736	.937
T3	60.9294	399.471	.615	.528	.941
T4	60.6706	395.795	.654	.594	.940
T5	60.2471	391.093	.739	.740	.938
T6	60.9294	393.352	.685	.571	.939
T7	61.8824	391.296	.732	.682	.938
T8	60.7882	382.359	.838	.798	.935
T9	61.1294	385.828	.795	.753	.936
T10	61.6824	390.029	.767	.802	.937
T11	61.4824	384.657	.767	.728	.937
T12	60.3765	392.618	.733	.675	.938
T13	59.7647	434.706	.179	.237	.950
T14	61.8118	393.702	.751	.747	.938
T15	61.5059	391.610	.657	.688	.940

Discussion and Modifications Made to the Questionnaire

The results from the factor and reliability analyses suggested that these scales were appropriate for measuring student perceptions of the motivation constructs with moderate to strong reliability ($.65 < \alpha < .94$). However, several items showed low loadings in a factor analysis, which were later corroborated by reliability tests of inter-item consistency. These items were from the BPNS (viz., A2, A4, C1), the IMI (viz., E5, P1, P5), the LSRQ (viz., CR1), and the LCQ (viz., T13). Additionally, moderately low, but acceptable loadings were found in the relatedness subscale of the BPNS for items R3, R6, and R7. Of these 11 items, ten are worded in a negative way or are reverse-scored

items. The relative impact of those questions on their scales were considered, and several modifications were made by reversing the wording of the questions or by altering the questions to better fit the constructs investigated in each subscale. Changes were made in the main study questionnaire to five of the items mentioned above and to two additional items.

Specific modifications to the questionnaire. Minor changes were made to the questionnaire in order to ensure that the questions had the best chance of measuring what they were originally designed to measure. Table 4.34 displays a summary of the changes made to individual items. Items A2 and C1 were removed from the questionnaire because of low loadings of -.03 and .20, respectively. Item C1 was similar to C6, but was interpreted differently by respondents for some reason. Item P1 (loading of .233) was adjusted by deleting "at all while" to add clarity to the item, and was retained on the questionnaire. Item T13 (loading of .16) was changed from a negatively-stated item to a positively-stated item. Item CR1 was omitted and replaced with a more explicitly controlling statement. Additionally, item CR2 behaved unexpectedly by loading much higher on the AR factor (.709) than on the CR factor (.126). CR2 was omitted and replaced with a statement about grading, which defines one extrinsic example of what it means to do well in a course. CR4 was replaced by AR6x in order to clarify what is meant by "perform well in the course." For the main study, performing well in the course refered to performing well on one's instrument. Following the pilot, this item was identified as an item that may have multiple interpretations and could benefit from additional clarification.

Table 4.34

Summary of Changes Made to the Wording of Questionnaire Items

Item	New Item #	Wording for Pilot	Wording for Main Study	Change
A2	-	I feel pressured in band	-	Removed
C1	-	Often, I do not feel very competent in band	-	Removed
P1	Same	I do not feel nervous at all while in band	I do not feel nervous in band	Deleted "at all while"
T13	Same	I don't feel very good about the way my teacher talks to me	I feel good about the way my teachers talks to me	Change to positively-stated item
CR1	CR1x	…because others might think badly of me if I didn't	…getting a good grade in band is important to me	Replaced with CR1x
CR2	CR2x	…because I would feel proud of myself if I did well in the course	…getting a good grade in band is important	Replaced with CR2x
CR4	AR6x	…because I am worried that I am not going to perform well in the course	…I would feel good about being able to perform well on my instrument.	Replaced with AR6x

Note. Items CR1x and CR2x have different prefix statements, and therefore, they are less similar than they appear in this table. Also, as will be shown in the results of the LSRQ in Chapter 5, there is a slight difference in how each behaved in the main study.

Between-factor Analysis

The previous sections focused on the ways in which each of the questionnaire items and subscales behaved in the pilot study, including reliability and factor analyses, which provided valuable information about how the questionnaire could be improved for use in the main study. This section provides a discussion of basic relationships between

factors, consisting of a correlation analysis. Correlation statistics were important to the development of the interview pilot, and they also gave a preliminary look at some of the relationships between factors in this study. However, caution should be used when interpreting the results of this section of the analysis, since the results are based upon data obtained prior to making revisions to the questionnaire. The main study reflects the improvements, which included omitting specific items to increase scale reliabilities, altering the wording on several items, and increasing the sample size.

Correlations. Pearson correlations coefficients were calculated between the nine motivation factors in the surveys. The desired significance level for this test was determined using the Bonferroni approach, in which .05 was divided by the number of correlations computed (Green & Salkind, 2005). In this computation, there were 36 correlations, which resulted in a corrected significance level of .0014. This method was used to minimize the chance of a Type I error.

The correlations between motivation factors are shown in Table 4.35. Most of the correlations were significant at the corrected significance level of .0014, although most correlations to the pressure-tension factor were not significant, even at the .05 level. The strongest correlations existed between interest-enjoyment and value-usefulness (.76), POTAS and competence (.74), value-usefulness and effort-importance (.72), interest-enjoyment and effort-importance (.68), and competence and interest-enjoyment (.64).

Table 4.35

Correlations Between Motivation Factors on the Phase 1 Pilot Questionnaires

	A	C	R	I	E	P	V	RAI
C	.56**							
R	.55**	.40**						
I	.44**	.64**	.36**					
E	.22*	.49**	.11	.68**				
P	-.03	-.06	.04	-.03	.00			
V	.43**	.55**	.26**	.76**	.72**	-.04		
RAI	.36**	.51**	.16	.53**	.49**	-.25**	.55**	
POTAS	.48**	.74**	.26*	.59**	.50**	-.22*	.58**	.46**

Note. A = autonomy; C = competence; R = relatedness; I = interest-enjoyment; E = effort-importance; P = pressure-tension; V = value-usefulness; RAI = relative autonomy index; POTAS = perception of teacher autonomy support.
** $p < .0014$
* $p < .05$

Implications for the pilot interviews. Several correlations were theoretically consistent with self-determination theory. Key relationships included those between BPNS and IMI factors, POTAS and BPNS factors, Pressure and RAI, RAI and BPNS factors, and between POTAS and RAI. These correlations provided a preliminary look at relationships between the main motivation factors, which were then used to inform the interview process. Questions were chosen that allowed students to share descriptions of their experiences that were likely to highlight the nature of their motivation in band.

CHAPTER 5: MAIN STUDY QUESTIONNAIRE RESULTS

Implementation and Subject Characteristics

Paper questionnaires were used to collect data in Phase 1 of the main study. Teachers and administrators at all of the participating schools requested that paper copies be used to collect data, because scheduling concerns and lack of adequate computer lab stations would not allow for data to be collected online in a manner that was convenient for the schools. Since the response rate for independent web-based questionnaires (i.e., students completing the questionnaires in their own time at home) in the initial pilot was only 57.5%, and the response rate for in-class participation in the second questionnaire in the full pilot was 92.2 %, paper copies were used to maximize response rate by providing access to the study for all students who wished to participate. Also, due to limited internet access at home for many students, band directors felt that more students would have the opportunity to participate if the questionnaire were offered in their class during the school day. Items were randomized in Surveymonkey and then transferred to a printable format. The questionnaire was reviewed to ensure that items with similar wording within subscales did not appear consecutively in the printed format. The paper version of the survey can be found in Appendix D.

Five high schools from a university community in the Midwest were represented in this study, from which 274 subjects were recruited from curricular concert band courses. Of the five schools, three were public: School A (n = 102), School B (n = 89), and School C (n = 38); and two were parochial: School D (n = 43) and School E (n = 2). Table 5.1 contains additional school information.

Table 5.1

Main Study School Information

School	Type	*n*	School Population	% Low Income	Grad Rate
School A	Public	102	1,481	32.0	94.5
School B	Public	89	1,170	46.0	92.7
School C	Public	38	1,063	52.0	92.5
School D	Parochial	43	380	NA	NA
School E	Parochial	2	120	NA	NA

Note. $N = 274$. School demographics were found on the state board of education website for the public school and from the administrative offices of the parochial schools.

The five schools varied in the number and types of instrumental music courses offered. Schools A and B, for example, had three concert bands, in which students were placed according to the results of chair auditions at the end of each spring semester. Students from each of the three bands combined each fall to comprise the marching band at each of the schools. School C had two concert bands, whose membership was also determined by auditions. School D offered one non-auditioned concert band with all of the high school band membership in one class. School E had a similar band structure to School D, and also included younger students from the middle school grades. Schools A, B, C, and D also offered percussion classes, music theory, and other elective courses as part of the instrumental music department.

Schools A, B, and C also compete frequently in regional marching band and concert band competitions. All three schools travel around the state and participate in three to six marching band competitions each school year, and they routinely audition for and are accepted to compete at the state concert band festival held at the local university. Additionally, all three schools are closely connected to elementary and middle school band programs in their districts, in which their students begin instrumental music study

prior to high school. In contrast, some students in School D enter the high school from public and private middle schools in the area, and do not necessarily share common prior band experiences with all of their high school classmates. School E is similarly comprised of students from public middle schools in the community, but also has a middle school band program within the K-12 parochial school, which is taught by the same director as the high school band, choir, and general music.

Subjects and Response Rate

Of the 280 students who were invited to participate in the questionnaire phase of the main study, 274 students successfully completed the questionnaire, resulting in a 97.9% response rate. Approval for this study was not obtained from a sixth school, and therefore, the students at that school were not calculated in the response rate as eligible unit respondents. The six eligible unit non-respondents consisted of five non-participants (i.e., students who chose not to participate) and one incomplete survey, which was eliminated from the analysis. Questionnaires were collected during the third quarter of the academic year. Descriptive statistics for gender and grade level are depicted in Table 5.2.

Participation Levels and Enhancement Opportunities

Basic data were collected about students' participation levels and enhancement opportunities, including whether they took private lessons, number of their in-school ensembles, out-of-school ensembles, years of experience in band, and number of secondary instruments they played. Nearly one half of the students undertook private lessons (n = 132, 48.2%), with statistics for responses in each of the other four participation categories being summarized in Table 5.3.

Table 5.2

Gender and Grade Level of Main Study Participants

Category		*n*	%
Gender			
	Male	130	47.4
	Female	144	52.6
	Total	**274**	**100.0**
Grade			
	9	89	32.5
	10	84	30.6
	11	69	25.2
	12	32	11.7
	Total	**274**	**100.0**

Table 5.3

Frequency of Participation Levels and Enhancement Opportunities

	In-School Ensembles		Out-of-School Ensembles		Years of Experience		Secondary Instruments	
#	*n*	%	*n*	%	*n*	%	*n*	%
0	-	-	137	50.0	-	-	98	35.8
1	31	11.3	82	29.9	13	4.7	103	37.6
2	113	41.2	37	13.5	18	6.6	40	14.6
3	79	28.8	11	4.0	16	5.8	14	5.1
4	26	9.5	4	1.5	14	5.1	4	1.5
5	19	6.9	1	0.4	76	27.7	6	2.2
6	4	1.5	2	0.7	53	19.3	7	2.6
7	1	0.4	-	-	54	19.7	1	0.4
8	1	0.4	-	-	26	9.5	1	0.4
9	-	-	-	-	3	1.1	-	-
10	-	-	-	-	1	0.4	-	-
Total	274	100.0	274	100.0	274	100.0	274	100.0

Note. # = student response for each category or count of total responses for each category. For example, a student was counted as a "3" for "In-School Ensembles" if they responded that they participate in "concert band, jazz band, and choir."

Subscale Reliabilities and Factor Analyses

Reliability tests and factor analyses were conducted for each subscale of the questionnaire, as a means of yielding information that could be used to determine which items could be included in the full analysis. Similarly to the pilot analysis, reliability tests provided the means to test for the consistency of responses within each dimension of the subscales. Additionally, the factor analyses of the main study results included all items in each subscale, which helped to determine the underlying factor structure of each subscale. Varimax rotation was used in all of the factor analyses.

Basic Psychological Needs Profile

Reliability analysis of the BPNS subscale. An initial reliability analysis of the BPNS subscale yielded acceptable Cronbach's alphas for each of the three dimensions. Reliability statistics for the Autonomy dimension are reported in Table 5.4, which includes the calculations of alphas for the dimension if each item were deleted. In the initial reliability test of the Autonomy dimension of the BPNS, $\alpha = .61$, which could be increased to .70 by deleting item A4.

Table 5.4

Reliability Analysis of the Autonomy Dimension of the BPNS

Item Number	Item Text	Cronbach's Alpha if Item Deleted
A1	I feel like I am free to decide for myself how to participate in band	.521
A3	I generally feel free to express my ideas and opinions in band	.519
A4	**In band, I frequently have to do what I am told**	.697
A5	People I interact with in band tend to take my feelings into consideration	.542
A6	I feel like I can pretty much be myself in band	.540
A7	**There is not much opportunity for me to decide for myself how to participate in band**	.519

Note. Reverse-scored items are shown in boldface.

Reliability statistics for the items in the Competence dimension of the BPNS are reported in Table 5.5, which includes the calculations of alphas for the dimension if each item were deleted. In the initial reliability test of the Competence dimension of the BPNS, $\alpha = .72$. Reliability statistics for the items in the Relatedness dimension of the BPNS are reported in Table 5.6, which includes the calculations of alphas for the dimension if each item were deleted. In the initial reliability test of the Relatedness dimension of the BPNS, $\alpha = .84$.

Table 5.5

Reliability Analysis of the Competence Dimension of the BPNS

Item Number	Item Text	Cronbach's Alpha if Item Deleted
C2	People I know tell me I am good at what I do in band	.70
C3	I have been able to learn interesting new skills recently in band	.65
C4	**In band, I do not get much of a chance to show how capable I am**	.70
C5	Most days I feel a sense of accomplishment from what I do in band	.63
C6	**I often do not feel very capable in band**	.70

Note. Reverse-scored items are shown in boldface.

Table 5.6

Reliability Analysis of the Relatedness Dimension of the BPNS

Item Number	Item Text	Cronbach's Alpha if Item Deleted
R1	I really like the people I interact with in band	.81
R2	I get along with the people I come into contact with in band	.81
R3	**I pretty much keep to myself and don't have a lot of social contacts in band**	.82
R4	I consider the people I regularly interact with in band to be my friends	.80
R5	People in band care about me	.82
R6	**There are not many people that I am close to in band**	.84
R7	**The people I interact with in band do not seem to like me very much**	.83
R8	People are generally pretty friendly towards me in band	.81

Note. Reverse-scored items are shown in boldface.

Confirmatory factor analysis of the BPNS subscale. After the reliability of each dimension was optimized, a confirmatory factor analysis demonstrated how well the BPNS items loaded onto each of the three theoretical factors. Table 5.7 shows how well each item loaded onto each of the three extracted factors.

Table 5.7

Confirmatory Factor Analysis of the BPNS Subscale Items

Item Number	Item Text	Rel	Comp	Aut
R2	I get along with the people I come into contact with in band	.756		
R1	I really like the people I interact with in band	.697		
R8	People are generally pretty friendly towards me in band	.638		
R4	I consider the people I regularly interact with in band to be my friends	.602		.444
R5	People in band care about me	.487		
R7	The people I interact with in band do not seem to like me very much	.489		
C6	I often do not feel very capable in band		.576	
C5	Most days I feel a sense of accomplishment from what I do in band		.488	
C3	I have been able to learn interesting new skills recently in band		.466	
C4	In band, I do not get much of a chance to show how capable I am		.473	
A1	I feel like I am free to decide for myself how to participate in band			.684
A3	I generally feel free to express my ideas and opinions in band			.424
A6	I feel like I can pretty much be myself in band			.412
A5	People I interact with in band tend to take my feelings into consideration	.552		.363

Note. Factor loadings greater than .300 are shown. Rel = Relatedness, Comp = Competence, Aut = Autonomy.

Cross loadings. Two items demonstrated cross-loadings. Items R4 and A5 loaded as expected from a theoretical standpoint, but also loaded onto a second factor. Item R4 loaded on both the Relatedness and Autonomy factors, and loaded higher on the Relatedness factor. Item A5 loaded on both the Relatedness and Autonomy factors, but loaded higher on the Relatedness factor. Although this demonstrates that item A5

contributed to the understanding of the Relatedness factor, it still demonstrated theoretical consistency by loading on the Autonomy factor. Therefore, for the purposes of calculating subjects' scores for each factor in the BNPS, items R4 and A5 were retained in their original theoretical dimension (i.e., Relatedness and Autonomy, respectively).

Items removed from analysis. C2 did not load onto any one factor. Additionally, items R3, R6, A4, and A7 did not load well, and they were removed from the analysis. It should be noted that the full pilot study also showed that the reverse items on each subscale were problematic to the reliability and factor analyses. Although not all reverse items decreased the reliability of their respective dimensions, something about the items complicated their loadings and prohibited them from loading higher than .300 on any factor.

Intrinsic Motivation Inventory

Reliability analysis of the IMI subscale. An initial reliability analysis of the IMI subscale yielded high Cronbach's alphas for each of the four dimensions. Reliability statistics for the Interest-enjoyment dimension are reported in Table 5.8, which includes the calculations of alphas for the dimension if each item were deleted. In the initial reliability test of the Interest-enjoyment dimension of the IMI, $\alpha = .78$, which could be increased to .93 by deleting item I3.

Table 5.8

Reliability Analysis of the Interest-enjoyment Dimension of the IMI

Item Number	Item Text	Cronbach's Alpha if Item Deleted
I1	I enjoy being in band very much	.68
I2	Band is fun to do	.70
I3	**I think band is a boring activity**	.93
I4	**Band does not hold my attention at all**	.74
I5	I would describe band as very interesting	.70
I6	I think that band is quite enjoyable	.70
I7	While I am in band, I think about how much I enjoy it	.71

Note. Reverse-scored items are shown in boldface.

Reliability statistics for the Effort-importance dimension of the IMI are reported in Table 5.9, which includes the calculations of alphas for the dimension if each item were deleted. In the initial reliability test of the Effort-importance dimension of the IMI, $\alpha = .90$, which would not be increased by deleting any of the items in this dimension.

Table 5.9

Reliability Analysis of the Effort-importance Dimension of the IMI

Item Number	Item Text	Cronbach's Alpha if Item Deleted
E1	I put a lot of effort into band	.85
E2	**I don't try very hard to do well at band**	.88
E3	I try very hard in band	.84
E4	It is important for me to do well in band	.89
E5	**I don't put much energy into band**	.89

Note. Reverse-scored items are shown in boldface.

Reliability statistics for the Value-usefulness dimension of the IMI are reported in Table 5.10, which includes the calculations of alphas for the dimension if each item were deleted. In the initial reliability test of the Value-usefulness dimension of the IMI, $\alpha = .96$, which would not be increased by deleting any of the items in this dimension.

Table 5.10

Reliability Analysis of the Value-usefulness Dimension of the IMI

Item Number	Item Text	Cronbach's Alpha if Item Deleted
V1	I believe band could be of some value to me	.95
V2	I think that being in band is useful	.95
V3	I think band is important	.95
V4	I would be willing to be in band again because it has some value to me	.96
V5	I think being in band could help me in the future	.95
V6	I believe being in band could be beneficial to me	.95
V7	I think band is an important activity	.95

Reliability statistics for the Pressure-tension dimension of the IMI are reported in Table 5.11, which includes the calculations of alphas for the dimension if each item were deleted. In the initial reliability test of the Pressure-tension dimension of the IMI, $\alpha = .31$, which could be increased to .73 by deleting item P1.

Table 5.11

Reliability Analysis of the Pressure-tension Dimension of the IMI

Item Number	Item Text	Cronbach's Alpha if Item Deleted
P1	**I do not feel nervous in band**	-
P2	I feel very tense while in band	.58
P3	**I am very relaxed in band**	.70
P4	I am anxious while in band	.68
P5	I feel pressured while in band	.72

Note. Since there was such a large difference between the initial alpha and the corrected scale, the reliability test was rerun without P1. The results of the second reliability test are reported in this table. Reverse-scored items are shown in boldface.

Confirmatory factor analysis of the IMI. After the reliabilities were calculated for each dimension of the IMI, a confirmatory factor analysis demonstrated how well the IMI

items loaded onto each of the four theoretical factors. Table 5.12 shows how well each item loaded onto each of the four extracted factors.

Table 5.12

Confirmatory Factor Analysis of the IMI Subscale Items

Item Number	Item Text	Val	Int	Eff	Pres
V5	I think being in band could help me in the future	.834			
V1	I believe band could be of some value to me	.822			
V6	I believe being in band could be beneficial to me	.818			
V2	I think that being in band is useful	.804			
V7	I think band is an important activity	.724			
V3	I think band is important	.657			
V4	I would be willing to be in band again because it has some value to me	.535			
I6	I think that band is quite enjoyable		.786		
I1	I enjoy being in band very much		.770		
I2	Band is fun to do		.756		
I5	I would describe band as very interesting		.700		
I7	While I am in band, I think about how much I enjoy it		.646		
I4	Band does not hold my attention at all		.513		
E3	I try very hard in band			.873	
E1	I put a lot of effort into band			.729	
E2	I don't try very hard to do well at band			.644	
E5	I don't put much energy into band			.584	
E4	It is important for me to do well in band	.635		.396	
P2	I feel very tense while in band				.832
P4	I am anxious while in band				.653
P3	I am very relaxed in band				.568
P5	I feel pressured while in band				.545

Note. Factor loadings greater than .400 are shown. Val = Value-usefulness, Int = Interest-enjoyment, Eff = Effort-importance, Pres = Pressure-tension.

Cross loadings. One item demonstrated cross-loading. E4 loaded on the Effort-importance factor as expected from a theoretical standpoint, but also on the Value-usefulness factor. Although this demonstrates that item E4 contributes to the understanding of the Value-usefulness factor, it still demonstrated theoretical consistency

by loading on the Effort-importance factor. Therefore, for the purposes of calculating each subject's scores for each factor in the IMI, it was retained in its original theoretical dimension (viz., Effort-importance).

Learning Self-Regulation Questionnaire

Reliability analysis of the LSRQ subscale. An initial reliability analysis of the LSRQ subscale yielded high Cronbach's Alphas for both dimensions. Reliability statistics for the Autonomous Regulation (AR) dimension are reported in Table 5.13, which includes the calculations of alphas for the dimension if each item were deleted. In the initial reliability test of the AR dimension of the LSRQ, $\alpha = .87$.

Table 5.13

Reliability Analysis of the Autonomous Regulation Dimension of the LSRQ

Item Number	Item Text	Cronbach's Alpha if Item Deleted
AR2	A solid understanding of music is important to my intellectual growth	.84
AR1	I feel like it's a good way to improve my understanding of the material	.82
AR6x	I would feel good about being able to perform well on my instrument	.84
AR3	My instructor seems to have insight about how to best learn the material	.87
AR4	It's interesting to learn more in band	.82
AR5	It's a challenge to solve band-related music problems	.87

Reliability statistics for the Control Regulation (CR) dimension are reported in Table 5.14, which includes the calculations of alphas for the dimension if each item were deleted. In the initial reliability test of the CR dimension of the LSRQ, $\alpha = .79$. The dimension reliability would only increase slightly to $\alpha = .80$ if either item CR3 or item CR5 were removed. Therefore, all items were retained.

Table 5.14

Reliability Analysis of the Controlled Regulation Dimension of the LSRQ

Item Number	Item Text	Cronbach's Alpha if Item Deleted
CR1x	Getting a good grade in band is important to me	.72
CR3	I would get a bad grade if I didn't do what my instructor suggests	.80
CR2x	Getting a good grade in band is important	.71
CR5	It's easier to follow my instructor's suggestions than to come up with my own practice suggestions	.80
CR6	A good grade in band will look positive on my record	.74
CR7	I want others to see that I am good at band	.76

Confirmatory factor analysis of the LSRQ subscale. After the reliability of both dimension were optimized, a confirmatory factor analysis demonstrated how the LSRQ items loaded onto the two theoretical factors. Table 5.15 shows how each item loaded onto the two extracted factors.

Cross loadings. Two items demonstrated cross-loading. Items CR1x and CR7 both loaded as expected from a theoretical standpoint, but also loaded onto the Autonomous Regulation factor. Item CR1x loads higher on the Control Regulation factor, as expected. CR1x is very similarly worded to CR2x, yet CR1x is the only item of the two that also loaded weakly on the Autonomous Regulation factor. The addition of the words “to me” may have made a difference in how the students responded to the question, causing the interpretation of the item as more of a self-valuing of grades, rather an interpretation that includes the valuing of grades by others.

Table 5.15

Confirmatory Factor Analysis of the LSRQ Subscale Items

Item Number	Item Text	Autonomous Regulation	Control Regulation
AR1	I feel like it's a good way to improve my understanding of the material	.856	
AR4	It's interesting to learn more in band	.807	
AR2	A solid understanding of music is important to my intellectual growth	.793	
AR6x	I would feel good about being able to perform well on my instrument	.725	
AR5	It's a challenge to solve band-related music problems	.498	
AR3	My instructor seems to have insight about how to best learn the material	.498	
CR2x	Getting a good grade in band is important		.865
CR1x	Getting a good grade in band is important to me	.346	.777
CR6	A good grade in band will look positive on my record		.633
CR3	I would get a bad grade if I didn't do what my instructor suggests		.437
CR7	I want others to see that I am good at band	.538	.389
CR5	It's easier to follow my instructor's suggestions than to come up with my own practice suggestions		.326

Note. Factor loadings greater than .300 are shown.

Unlike CR1x and the other Control Regulation items, CR7 loaded higher on the Autonomous Regulation factor. Although this demonstrates that item CR7 contributed to the understanding of the Autonomous Regulation factor, it still demonstrated theoretical consistency by loading on the Control Regulation factor. Also, the Cronbach analysis indicated that CR7 fit well with the other items that loaded onto the Control Regulation factor. Therefore, for the purposes of calculating each subject's Relative Autonomy Index, item CR7 was retained in its original theoretical dimension (i.e., Control Regulation).

A possible explanation for why Item CR7 loaded so highly on the Autonomous Regulation factor was later demonstrated in the interviews. As described in Chapter 7,

one subject (Traci) spoke about the role of playing her instrument in front of others, and she said that she wanted to play well and have others see that she was good, so she could provide a good example and be able to help others perform well too. Her perception of item CR7 was, therefore, conceptually different than intended in the original scale, and it is possible that it was interpreted in multiple ways by students.

Possible third factor to explore in future research. The purpose of using these two factors was to determine whether the underlying structure was consistent with the theoretical factors, and to use the two factors to calculate each student's Relative Autonomy Index. Since there was a minor discrepancy in the first factor analysis, another was conducted to explore all factors with eigenvalues over 1.0. After conducting the second analysis, three factors were found, including the two main factors that were previously confirmed. Table 6.13 shows the factor loadings for the three-factor solution.

The resulting eigenvalues were 5.33 for Autonomous Regulation, 1.63 for Control Regulation, and 1.11 for Factor 3. Factor 3 had a relatively low eigenvalue, and a scree test showed that one might choose to exclude it if extracted in an exploratory analysis. However, future research is needed to explore the characteristics of an additional factor. This analysis could demonstrate subtle, yet important differences in how band students interpret the meaning of these items. For example, all three of the items that mentioned the instructor loaded on Factor 3. Future research might lead to findings that explain how students perceive the instructor's function in terms of types of regulation at work in ensemble environments.

Table 5.16

Exploratory Three-factor Solution for the LSRQ

Item Number	Item Text	Autonomous Regulation	Control Regulation	Factor 3
AR1	I feel like it's a good way to improve my understanding of the material	.859		
AR2	A solid understanding of music is important to my intellectual growth	.807		
AR4	It's interesting to learn more in band	.778		
AR6x	I would feel good about being able to perform well on my instrument	.701		
AR5	It's a challenge to solve band-related music problems	.514		
AR3	My instructor seems to have insight about how to best learn the material	.443		.593
CR2x	Getting a good grade in band is important		.813	
CR1x	Getting a good grade in band is important to me	.346	.806	
CR6	A good grade in band will look positive on my record		.642	
CR3	I would get a bad grade if I didn't do what my instructor suggests		.338	.384
CR7	I want others to see that I am good at band	.505	.379	
CR5	It's easier to follow my instructor's suggestions than to come up with my own practice suggestions			.584

Note. Factor loadings greater than .300 are shown.

Learning Climate Questionnaire

Reliability analysis of the LCQ demonstrated high reliability at $\alpha = .96$. The reliability was also $\alpha = .96$ regardless of whether any of the items were deleted from the subscale. Not surprisingly, the subsequent confirmatory factor analysis demonstrated that all 15 items loaded onto a single factor, which represented Perceptions of Teacher Autonomy Support (POTAS). The loadings are shown in Table 5.17. From these results, it is apparent that students' answers were consistent for the items within the LCQ.

Table 5.17

Confirmatory Factor Analysis of the LCQ Subscale Items

Item Number	Item Text	POTAS Factor Loading
T1	I feel that my teacher provides me choices and options	.77
T2	I feel understood by my teacher	.84
T3	I am able to be open with my teacher during class	.75
T4	My teacher conveys confidence in my ability to do well in band	.68
T5	I feel that my teacher accepts me	.78
T6	My teacher makes sure I really understand the goals of band and what I need to do	.76
T7	My teacher encourages me to ask questions	.78
T8	I feel a lot of trust in my teacher	.89
T9	My teacher answers my questions fully and openly	.80
T10	My teacher listens to how I would like to do things	.79
T11	My teacher handles people's emotions very well	.85
T12	I feel that my teacher cares about me as a person	.84
T13	I feel good about the way my teacher talks to me	.87
T14	My teacher tries to understand how I see things before suggesting a new way to do things	.80
T15	I feel able to share my feelings with my teacher	.83

Summary of Reliability and Factor Analyses

Table 5.18 shows the reliability of each dimension within the subscales that were used in the main study questionnaire. The results reflected high reliability for each of the subscales, which ranged from an alpha of .70 for Autonomy and .96 for POTAS and Value-usefulness. Additionally, Table 5.19 shows the descriptive statistics for the distribution of each factor within the subscales that were used in the main study questionnaire.

Table 5.18

Summary of Dimension Reliabilities

Dimension	Cronbach's Alpha
Autonomy	.70
Competence	.72
Relatedness	.84
Interest-enjoyment	.93
Effort-importance	.90
Value-usefulness	.96
Pressure-tension	.73
RAI-AR	.87
RAI-CR	.79
POTAS	.96

Table 5.19

Descriptive Statistics for each Motivation Factor

Factor	M	SD	Skewness	Kurtosis
Autonomy	5.00	1.13	-0.40	-0.27
Competence	5.17	1.20	-0.72	0.62
Relatedness	5.63	1.04	-1.02	1.22
Interest-enjoyment	5.30	1.53	-0.94	0.11
Effort-importance	5.03	1.44	-0.52	-0.48
Value-usefulness	5.62	1.45	-1.06	0.32
Pressure-tension	2.73	1.24	0.60	-0.23
RAI	0.28	1.23	0.02	1.84
POTAS	5.17	1.42	-0.75	-0.08

Open-ended Questions

Three open-ended questions were used in the main study questionnaire to gain additional information about what students (a) enjoy the most about band, (b) would change about their band experience, and (c) anticipate about the role that music will play in their lives after high school. This section of the questionnaire was reduced to three questions for the main study to help avoid responder fatigue, to address the concerns

raised by pilot subjects regarding the length of the initial version, and to add focus to some of the issues that emerged from the pilot interviews regarding these three areas. The following sections present a summary of responses to each of the questions. The responses aided in the refinement of the interview protocol, and led to the quantification of answers from the third question, which provided an opportunity for exploratory analysis of relationships between the motivation constructs and attitudes about future engagement in music activities.

The students' responses were used during the interviews to help gain clarification about what they enjoy about band, what they would change, and what they anticipate about their future participation. After the interviews were completed, the responses for this section of the questionnaire were examined more closely. For each of the three questions, responses were manually according to category, and new code categories were created as they appeared during the coding process. Afterward, the codes were reviewed to determine if there were similarities among categories and whether any would gain clarity by "lumping" together some categories or "splitting" others (Saldaña, 2009, p. 19). To ensure the accuracy of any combined categories, responses were recounted with the revised codes.

Open-ended question 1: What do you enjoy most about band? When students wrote about what they enjoy most about band, they wrote about band in their own terms, based upon their own experiences. This question yielded a variety of responses. The degree of responses ranged from "absolutely nothing" to "absolutely everything," and the depth of responses ranged from a couple of words to several sentences. The frequencies of responses are provided in Table 5.20.

Table 5.20

Frequency of Responses Regarding Enjoyment in Band

What do you enjoy most about band?	*n*	%
Playing music	121	44.2
Friends, people, belonging, social aspects	119	43.4
Learning new skills, improving, achievement, sense of accomplishment	53	19.3
Music (selection, type, difficulty)	34	12.4
Emotional, creative, and expressive outlet	15	5.5
Concerts and performances	14	5.1
Competition	8	2.9
Listening to the end result	8	2.9
Provides a challenge	8	2.9
Generally a fun experience	7	2.6
Life skills, benefits transfer outside of band	7	2.6
Nothing, I don't enjoy band	7	2.6
The teacher	7	2.6
Trips	7	2.6
Showing off	6	2.2
Provides activity and movement	3	1.1
Easy grade, no homework	2	0.7
Solos	2	0.7
Band camp	1	0.4
Independence	1	0.4
Leadership opportunities	1	0.4

Note. The numbers and percentages of responses do not equal 100%, because some students provided more than one answer to this question.

The responses were consistent with themes found in previous research. Campbell et al. (2007), for example, found that students expressed meanings of music in and out of school through identity formation, emotional benefits, life benefits, social benefits, and impressions of school music programs and their teachers. Similarly, many students in this study responded that they enjoyed the social, emotional, and musical aspects of their band experience. Other frequent responses included enjoyment of learning new skills and performing.

Open-ended question 2: If you were to change anything about your band experience, what would you change? Responses ranged from "nothing" to "everything, especially my director. He's an [expletive]." Other responses referred to music choice,

scheduling, competition, grading, student leadership, and a variety of other suggestions. The frequencies of responses are shown in Table 5.21

Table 5.21

Frequency of Responses Regarding Desired Changes in the Band Experience

If you could change anything about your band experience, what would you change?	*n*	%
Nothing	47	17.2
Improve other students' attitudes, more discipline and focus	30	10.9
Music (selection, type, difficulty)	30	10.9
Teacher, teacher's attitude and communication style	28	10.2
Increase participation in additional groups, more instruments	16	5.8
Would practice more, try harder	15	5.5
Improve scheduling issues	12	4.4
Want to be better (personally)	10	3.6
More choice	9	3.3
Play a different instrument	9	3.3
Don't know, have never thought of it	8	2.9
Would quit	7	2.6
Evaluation practices (grading and auditions)	5	1.8
Have better facilities and equipment	5	1.8
Make more friends	5	1.8
Fewer trips, performances, assignments	4	1.5
Less competition	3	1.1
Want more people in band	3	1.1
More competition	2	0.7
Everything	1	0.4
Win more at band competitions	1	0.4

Note. The numbers and percentages of responses do not equal 100%, because some students provided more than one answer to this question.

Open-ended question 3: When you graduate from high school, what role do you think music will play in your life? Students' perceptions of their level of choice, effort, and achievement were obtained in the fixed-scale section of the questionnaire, representing three of the four indicators that Schunk et al. (2008) identify as describing traits of a highly-motivated individual. A relatively high level of persistence, the fourth indicator, can be assumed for these respondents, because all of the students persisted long enough to be enrolled in a school band class when this study was conducted. However, in order to more closely examine attitudes about persistence, the third open-ended question

collected information about what subjects anticipated about the role of music in their lives after high school.

Since this is not a longitudinal study, this question offers only a narrow look at attitudes about persistence, and caution should be used when interpreting the results. Since motivation is context-specific and can change over time, this question was not meant to predict actual persistence, but to examine students' current attitudes about whether and to what degree they believed they would persist in the future. This could have immediate implications, however, if low attitudes about future participation in music were paired with responses like "I would quit" on the previous question.

Responses ranged from "none" to "I plan to have a career in music." Additional responses included descriptions of music hobbies, performing in college, and belonging to community music organizations. Responses were scored by two music educators, who assigned each to one of four categories, based on their level of anticipated engagement. The scores were tested for inter-judge reliability, and a Cronbach's alpha of .96 demonstrated a high level of agreement between the scores. Additionally, Kappa (Cohen, 1960) was calculated to correct for the possibility of chance agreement between the scorers. The results ($\kappa = .80$, $p < .001$) indicated substantial agreement (Krippendorff, 1980; Rietveld & van Hout, 1993) between the scorers. The mean score for each subject was then calculated and used to represent the subjects' anticipated future engagement with music.

The results reflected a relatively normal distribution ($M = 1.45$, $SD = 0.87$), although the scores were skewed slightly (.31), demonstrating that a majority of the responses lie below the mean. Relationships between the main motivation factors and this

variable were explored through correlation and regression analysis and are reported in the next sections. Additionally, the written responses to this question were used to help develop relevant areas of focus for the Phase 2 interviews.

Correlations

Correlations between motivation factors demonstrated moderate relationships within and between components of each scale on the questionnaire. Table 5.22 presents the results of the correlation analysis, which includes relationships with the exploratory variable of anticipated future participation (AFP) in music activities.

Table 5.22

Correlations Between Motivation Factors in Main Study Questionnaires

	A	C	R	I	E	P	V	RAI	POTAS
C	.52								
R	.62	.54							
I	.55	.66	.59						
E	.52	.61	.49	.75					
P	-.32	-.26	-.30	-.18	-.14*				
V	.54	.58	.54	.78	.71	-.16*			
RAI	.23	.21	.20	.34	.33	-.07*	.37		
POTAS	.43	.59	.42	.54	.46	-.20	.46	.15*	
AFP	.35	.30	.35	.47	.53	-.11*	.57	.39	.22

Note. A = autonomy; C = competence; R = relatedness; I = interest-enjoyment; E = effort-importance; P = pressure-tension; V = value-usefulness; RAI = relative autonomy index; POTAS = perception of teacher autonomy support; AFP = anticipated future participation.
$p < .01$
*$p > .01$

Strong relationships were found between elements within the IMI and the BPNS. Additionally, significant correlations were shown in the comparison of IMI factors and AFP, BPNS factors and IMI, POTAS and Competence, and POTAS and Interest. The results of this preliminary analysis were theoretically consistent with self-determination theory. Factor relationships were further refined in the regression analyses that follow within the next section.

Multiple Regression Analysis

Models of relationships were constructed using multiple regression analyses. The following sections highlight key relationships that were found to be significant in the prediction of the main motivation factors and enhancement opportunities. In each analysis, the predictors were the nine motivation factors, the eight characteristic and enhancement variables, and AFP, and the significance level was set at .05.

Motivation Factors

Autonomy. The analysis found that Relatedness and Pressure-tension demonstrated significant relationships to Autonomy, with subsequent analysis on these two variables showing a linear relationship ($F(2, 269) = 89.46$, $p < .001$) and a sample multiple correlation coefficient of .63. These results indicate that 40% of the variance of Autonomy can be accounted for by these two variables (See Table 5.23).

Table 5.23

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with Autonomy

Predictors	Standardized Beta Coefficient	Correlation between each predictor and Autonomy	Correlation between each predictor and Autonomy controlling for all other predictors
Relatedness	.57	.62	.58
Pressure-tension	-.14	-.32	-.17

$p < .05$

Competence. POTAS, Interest-enjoyment, Effort-importance, and Relatedness demonstrated significant relationships to Competence, with subsequent analysis on these four variables showing a linear relationship ($F(4, 266) = 81.92$, $p < .001$) and a sample

multiple correlation coefficient of .74. 52.2% of the variance of Competence was accounted for by these four variables (see Table 5.24).

Table 5.24

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with Competence

Predictors	Standardized Beta Coefficient	Correlation between each predictor and Competence	Correlation between each predictor and Competence controlling for all other predictors
POTAS	.29	.59	.34
Interest-enjoyment	.24	.66	.21
Effort-importance	.20	.61	.20
Relatedness	.18	.54	.21

$p < .05$

Relatedness. The analysis found that Autonomy, Interest-enjoyment, Competence, and Pressure-tension demonstrated significant relationships to Relatedness, with subsequent analysis on these four variables showing a linear relationship ($F(4, 267) = 64.82$, $p < .001$) and a sample multiple correlation coefficient of .70. These results indicate that 49% of the variance of Relatedness can be accounted for by these four variables (see Table 5.25).

Table 5.25

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with Relatedness

Predictors	Standardized Beta Coefficient	Correlation between each predictor and Relatedness	Correlation between each predictor and Relatedness controlling for all other predictors
Autonomy	.36	.62	.36
Interest-enjoyment	.28	.59	.27
Competence	.15	.54	.15
Pressure-tension	-.10	-.30	-.14

$p < .05$

Interest-enjoyment. The analysis found that Competence, Relatedness, Effort-importance, Value-usefulness, and POTAS demonstrated significant relationships to Interest-enjoyment, with subsequent analysis on these five variables showing a linear relationship ($F(5, 265) = 144.49$, $p < .001$) and a sample multiple correlation coefficient of .86. These results indicate that 73.2% of the variance of Interest-enjoyment can be accounted for by these five variables (see Table 5.26).

Table 5.26

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with Interest-enjoyment

Predictors	Standardized Beta Coefficient	Correlation between each predictor and Interest-enjoyment	Correlation between each predictor and Interest-enjoyment controlling for all other predictors
Value-usefulness	.41	.78	.46
Effort-importance	.28	.75	.34
Competence	.17	.66	.24
Relatedness	.14	.59	.21
POTAS	.09	.54	.14

$p < .05$

Effort-importance. The analysis found that Interest-enjoyment, AFP, Competence, and Value-usefulness demonstrated significant relationships to Effort-importance, with subsequent analysis on these four variables showing a linear relationship ($F(4, 237) = 109.23$, $p < .001$) and a sample multiple correlation coefficient of .81. These results indicate that 64.8% of the variance of Effort-importance can be accounted for by these four variables (see Table 5.27).

Table 5.27

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with Effort-importance

Predictors	Standardized Beta Coefficient	Correlation between each predictor and Effort-importance	Correlation between each predictor and Effort-importance controlling for all other predictors
Interest-enjoyment	.46	.77	.38
AFP	.17	.53	.23
Value-usefulness	.18	.72	.16
Competence	.13	.59	.15

$p < .05$

Value-usefulness. The analysis found that Interest-enjoyment, Effort-importance, and AFP demonstrated significant relationships to Value-usefulness, with subsequent analysis on these three variables showing a linear relationship ($F(3, 238) = 186.43$, $p < .001$) and a sample multiple correlation coefficient of .84. These results indicate that 70.1% of the variance of Value-usefulness can be accounted for by these three variables (see Table 5.28).

Table 5.28

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with Value-usefulness

Predictors	Standardized Beta Coefficient	Correlation between each predictor and Value-usefulness	Correlation between each predictor and Value-usefulness controlling for all other predictors
Interest-enjoyment	.58	.80	.56
AFP	.22	.57	.32
Effort-importance	.16	.72	.18

$p < .05$

Pressure-tension. The analysis found that School, Autonomy, and Relatedness demonstrated significant relationships to Pressure-tension, with subsequent analysis on

these three variables showing a linear relationship ($F(3, 268) = 16.44$, $p < .001$) and a sample multiple correlation coefficient of .39. These results indicate that 15.5% of the variance of Pressure-tension can be accounted for by these three variables (see Table 5.29).

Table 5.29

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with Pressure-tension

Predictors	Standardized Beta Coefficient	Correlation between each predictor and Pressure-tension	Correlation between each predictor and Pressure-tension controlling for all other predictors
Autonomy	-.26	-.32	-.21
School	-.19	-.14	-.20
Relatedness	-.15	-.30	-.13

$p < .05$

Relative Autonomy Index (RAI). The analysis found that AFP, Secondaries, and YearsExp demonstrated significant relationships to RAI, with subsequent analysis on these three variables showing a linear relationship ($F(3, 240) = 18.55$, $p < .001$) and a sample multiple correlation coefficient of .43. These results indicate that 18.8% of the variance of RAI can be accounted for by these three variables (see Table 5.30).

Table 5.30

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with RAI

Predictors	Standardized Beta Coefficient	Correlation between each predictor and RAI	Correlation between each predictor and RAI controlling for all other predictors
AFP	.35	.39	.35
Secondaries	.18	.18	.18
YearsExp	-.13	-.07	-.14

$p < .05$

Perceptions of Teacher Autonomy Support (POTAS). The analysis found that Competence, Interest-enjoyment, and School demonstrated significant relationships to POTAS, with subsequent analysis on these three variables showing a linear relationship ($F(3, 267) = 67.46$, $p < .001$) and a sample multiple correlation coefficient of .66. These results indicate that 43% of the variance of POTAS can be accounted for by these three variables (see Table 5.31).

Table 5.31

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with POTAS

Predictors	Standardized Beta Coefficient	Correlation between each predictor and POTAS	Correlation between each predictor and POTAS controlling for all other predictors
Competence	.42	.59	.37
Interest-enjoyment	.26	.54	.24
School	.22	.35	.27

$p < .05$

Attitudes about future participation (AFP). The analysis found that Lessons, OSEnsembles, Effort-importance, Value-usefulness, and RAI demonstrated significant relationships to AFP, with subsequent analysis on these five variables showing a linear relationship ($F(5, 235) = 17.40$, $p < .001$) and a sample multiple correlation coefficient of .68. These results indicate that 46% of the variance of AFP can be accounted for by these five variables (see Table 5.32).

Table 5.32

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with AFP

Predictors	Standardized Beta Coefficient	Correlation between each predictor and AFP	Correlation between each predictor and AFP controlling for all other predictors
Value-Usefulness	.29	.57	.26
Effort-Importance	.22	.53	.21
OSEnsembles	.22	.34	.28
RAI	.18	.39	.22
Lessons	.15	.25	.20

$p < .05$

Enhancement Opportunities

Lessons. A logistic regression analysis found that AFP, Secondaries, YearsExp, and Grade demonstrated significant relationships to Lessons, with subsequent analysis on these four variables showing significance in a test of the overall model (Wald = 5.02, p = .025).

Predictors	Beta Coefficient	Wald Statistic	p
AFP	.74	19.06	< .001
Grade	-.52	9.72	.002
YearsExp	.21	5.34	.02
Secondaries	-.20	4.05	.04

ISEensembles. The analysis found that AFP, School, Secondaries, and Grade demonstrated significant relationships to ISEnsembles, with subsequent analysis on these four variables showing a linear relationship ($F(4, 239) = 14.29$, $p < .001$) and a sample multiple correlation coefficient of .44. These results indicate that 19% of the variance of ISEnsembles can be accounted for by these four variables (see Table 5.34).

Table 5.33

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with ISEnsembles

Predictors	Standardized Beta Coefficient	Correlation between each predictor and ISEnsembles	Correlation between each predictor and ISEnsembles controlling for all other predictors
AFP	.26	.29	.26
School	.25	.21	.26
Secondaries	.16	.25	.17
Grade	.16	.17	.17

$p < .05$

OSEnsembles. The analysis found that AFP and Secondaries demonstrated significant relationships to OSEnsembles, with subsequent analysis on these two variables showing a linear relationship ($F(2, 241) = 20.39$, $p < .001$) and a sample multiple correlation coefficient of .38. These results indicate that 14.5% of the variance of OSEnsembles can be accounted for by these two variables (see Table 5.35).

Table 5.34

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with OSEnsembles

Predictors	Standardized Beta Coefficient	Correlation between each predictor and OSEnsembles	Correlation between each predictor and OSEnsembles controlling for all other predictors
AFP	.28	.34	.28
Secondaries	.19	.27	.19

$p < .05$

Secondaries. The analysis found that YearsExp, OSE, and RAI demonstrated significant relationships to OSEnsembles, with subsequent analysis on these three variables showing a linear relationship ($F(3, 269) = 18.23$, $p < .001$) and a sample

multiple correlation coefficient of .41. These results indicate that 16.8% of the variance of Secondaries can be accounted for by these three variables (See Table 5.36).

Table 5.35

Standardized Beta Coefficients, Bivariate Correlations, and Partial Correlations of the Predictors with Secondaries

Predictors	Standardized Beta Coefficient	Correlation between each predictor and Secondaries	Correlation between each predictor and Secondaries controlling for all other predictors
YearsExp	.25	.23	.26
OSEnsembles	.24	.25	.25
RAI	.22	.24	.24

$p < .05$

Implications for the Interview Phase

The questionnaire results provided several areas of focus for the interview phase, particularly (a) relationships among the motivation factors and (b) responses to the open-ended questions. A summary model of the regression analyses is presented in Chapter 8, which provided the means to identify key relationships of factors with psychological needs, intrinsic motivation, POTAS, AFP, RAI, student characteristics, and enhancement opportunities. Additionally, the open-ended responses in the questionnaire reflected widely varied perspectives on what students enjoy about band, what they would change, and their anticipated future participation in music activities. As will be described in Chapter 7, these responses aided in expanding the selection criteria for the interviews, and provided additional information that contributed to a preliminary contextualization of responses from the motivation scales.

PART III: PHASE 2 INTERVIEWS

CHAPTER 6: INTERVIEW METHOD

Phase 2 of this study consisted of interviews with 13 students (i.e., four in the pilot and nine in the main study) who completed the Phase 1 questionnaire. The goal of the interviews was to enhance the findings of the psychometric measures of self-determination from Phase 1, while enriching the story of how students' motivation profiles contribute to their interpretation of their high school band experience. This approach adopted Bogdan and Biklen's (2007) technique of using interviews "to gather descriptive data in the subjects' own words so that the researcher can develop insights on how subjects interpret some piece of the world" (p. 103).

Participants

Students were selected from the Phase 1 questionnaire respondents using purposive sampling; that is, students were selected based upon whether they showed uncharacteristically high or low scores on the LSRQ. Characteristic cases were chosen with the aim of selecting data-rich participants; and therefore, the students with the highest and lowest RAI scores were invited to participate. The RAI scores were used to aid in the recruitment process because of the focus of the LSRQ on regulatory autonomy, which is the main thrust of self-determination theory (i.e., intrinsic and extrinsic motivation orientations). Potential interview participants were given an information letter and consent packet, inviting them to participate in the interview phase of the study.

Response and Consent

If the students with the highest or lowest RAI scores did not consent to participate in the study, the planned sampling procedure was to use next highest or lowest RAI score to identify the next invitee, and continue this process until three students were chosen at

each end of the regulatory spectrum. Although it was not necessary to contact additional subjects for the main study interviews, two additional students were contacted for the pilot interviews. Also, four additional subjects were chosen for the main study interviews, based upon alternate sampling criteria; of which, one of the students chose not to participate. The selection criteria and details regarding the additional subjects (i.e., not chosen based upon RAI scores) are included in Chapter 7.

Building Rapport in the Pre-interview Stage

Prior to the interviews, each subject was contacted on several occasions, including when recruiting for and administering the questionnaires, distributing interview information and consent packets, and corresponding via phone and email to explain consent procedures and schedule interview times. These interactions provided opportunities for the students to develop a rapport with me prior to the interviews.

Procedure

A semi-structured interview method was used in Phase 2, using an interview guide (see Patton, 2002) of questions (see Appendix E). Using this guide, the interview procedure utilized elements of conversational, interview guide, open-ended, and fixed response interview approaches (Teddlie & Tashakkori, 2009). Self-determination theory served as the basis of the themes explored in the interviews. As such, the main interview themes were predetermined by the theory itself (i.e., the factors that were explored in Phase 1).

In addition to the structured elements of the interview, subjects were given an opportunity to provide additional information about their experiences, which resulted in additional emergent themes. Also, at the end of the interview, the dimensions of the

survey were disclosed to the subjects, and they indicated how they would score themselves in regard to each of the survey dimensions. Those answers were compared to the questionnaire.

Data Analysis Procedures

The interview data were analyzed and presented in several ways. For example, responses were coded according to the factors confirmed in the survey analysis and any additional themes that emerge. Additional information about the coding process is presented in Chapter 7. Narratives were constructed, which include background information, a story of each subject and their experience in band, and contextualization of their responses on the survey and the rest of the interview. The narratives tell the story of the color and complexity of the subjects' band experience in terms of important themes. Additionally, comparisons were made between subjects' questionnaire responses and their responses to questions in the interview.

Interview Pilot and Refinement

A pilot was conducted for the purpose of refining the interview procedure, including testing the technical aspects of audio-recording, transcribing the audio files, coding the transcripts, and analyzing and reporting the data. Four interviewees were chosen from the questionnaire pilot based upon their scores on the LSRQ. RAI scores were chosen because autonomous regulation is one of the main theoretical constructs of self-determination theory, and RAI scores seemed to correspond to high scores on other factors. For example, the subject with the highest RAI score in the Phase 1 pilot study also had high scores on the other motivation factors, with the exception of the pressure-tension factor, which was relatively low. Conversely, the subject with the lowest RAI

score also had relatively low scores on the other factors, with exception of the pressure-tension factor, which was relatively high. The subject with an RAI of zero scored between the high scorer and the low scorer on all of the survey subscales. The correlation analysis from the pilot questionnaire data supported this pattern in the data, and suggested that choosing interview subjects by RAI could be a way to obtain information-rich data from respondents who also vary in their responses in other areas.

Recordings, Transcripts, and Member Checking

The interviews were recorded using two devices for redundancy: a handheld digital recorder and laptop recording software. Sound level adjustments were necessary to ensure that all of the data were being recorded with the best possible quality. Adjustments were noted for future use in the main study interviews. The recordings were then transcribed by hand, printed, and distributed to subjects for member checking. Two subjects made no changes to the transcripts, and two made notes on the transcripts about parts of the interview where they felt as though they misinterpreted the question or had something to add to what they had said. Those clarifications were made through a series of telephone conversations within one month of the interviews. The subjects approved the modified transcripts, and the results were coded by hand to identify the prominence of major issues related to the motivation factors and other emergent themes.

The interview process allowed for four separate opportunities to improve and focus the interview questions and procedures. The interviews were meant to be more structured than they became, but multiple interviews provided a chance to embrace a semi-structured approach, in which the subjects were gently guided from one motivation

construct to another. The interview questions served as a guide to make sure that our conversations hit all of the critical points of the interview guide.

From the four pilot interviews, one was selected to be presented here based upon the depth of responses from the subject. The insight that this interview provided was due, in part, to the depth of the answers from the subject. Other benefits were due to the refinement of the interview procedure, which was improved by conducting multiple interviews and becoming more comfortable with the conversational structure of investigating the motivation constructs with high school band students.

Nicole

Nicole is a freshman band student at RHS (i.e., the small, rural high school). At the time of the interview, she had been playing saxophone for four years, did not take private lessons, and did not participate in out-of-school music ensembles. Table 6.1 shows her scores on each of the subscales of the survey.

Table 6.1

Nicole's Motivation Profile Scores

	Factor								
	A	C	R	I	E	P	V	RAI	POTAS
Score	5.00	6.17	6.43	6.86	6.00	4.00	7.00	3.66	4.27

Note. A = autonomy; C = competence; R = relatedness; I = interest-enjoyment; E = effort-importance; P = pressure-tension; V = value-usefulness; RAI = relative autonomy index; POTAS = perception of teacher autonomy support.

Nicole's scores were high for RAI, competence, relatedness, interest-enjoyment, effort-importance, and value-usefulness. Her scores were in the middle of the scale for pressure-tension and POTAS. Although her score for perceived autonomy was higher than the midpoint of the scale, it was noticeably lower that the other two psychological

needs subscales. This indicates that she feels as though she has some functional autonomy in band, but not as much as her perceived levels of competence, relatedness, and other factors. She was chosen for interviews because she had the third highest RAI score in the survey sample (3.66). The subjects with the two highest RAI scores were unavailable to participate during the timeframe that was allotted for conducting interviews.

In terms of musical background, Nicole's family has had limited experience in school music ensembles. Her father played French horn in high school, and her aunt played the flute. Neither her father nor her aunt played a large part in her decision to play the saxophone in the school band. She points to her first exposure to the high school marching band at a football game that she attended while in elementary school. She remembered:

> I just really used to like to watch the band at halftime at the football games. I didn't go to see the game. I went to watch the marching band. I would watch the football games and I would think that I really want to do that, and I really wanted to play all of the instruments in the band. I finally got into band, and I was excited. I'm excited to learn more as I go.

Soon after she started in band, her younger siblings took notice of her new study and practice activities. Nicole's brother and sister have looked up to her since then, because they could see that she liked "having the ability to play an instrument and to do something that not everything could do." She gained personal satisfaction from feeling competent as a saxophone performer.

As she began high school, she enjoyed living her dream of playing in the marching band. She warned that being a marching band member is a lot of hard work. She said, "you have to learn how to play the music, learn how to stand, learn the posture, learn how to walk… you have to get everything in step. It's a big step in a band career."

When asked if it is fun to stand with good posture and do all of the marching band types of things, she said, "it's a lot of fun, especially the way my directors have put it together for me. It's hard, but it's worth every drop of sweat." I asked her what she got out of that hard work, and why she is so determined to do participate at such a high level in marching band. She combined her experiences as an audience member with her experience of performance in the group, saying:

> It's exhilarating… just the happiness you see when you're listening to the band and watching the band… seeing all of the formations on the field. It just makes me happy to be able to show these people that we all have worked so hard to get this far and we can just give them what I felt when I was younger.

Nicole enjoys marching band, but she also enjoys concert, pep, and jazz band ensemble experiences. When asked about the difference between marching band and the other performance opportunities, she simply stated that marching band is a concert band that marches on the football field. Since the marching band at her school competes, I asked her about how the competitive element of the experience might make it different for her. Regarding competition and performance feedback, she said:

> If a judge doesn't react well and he explains it to me, I just take it as help… he knows what he's doing. If it's an audience member, I don't take it too personally. I'm not going to stop playing because of an audience member that didn't feel the

way I did about the music. Negative responses are hard, sometimes, depending on the person. I just take it as another step in the road.

Her response highlights an autonomously regulated and intrinsically motivated approach to her music activities. Also, she acknowledges that not everyone in the group reacts the same way, and that she focuses on taking information from judges and audience members as helpful pieces of information that can improve her experience. This is consistent with her approach to the nature of preparing for marching band competitions, saying that her teacher provided the means to improve and made the experience meaningful.

I asked Nicole about how she receives feedback from judges about her performance. She indicated that solo and ensemble judges typically give feedback in person, and she looks forward to the opportunity to talk with the judges. In marching band, she said, "you're supposed to be afraid of the judges." When I asked her whether she was afraid of the judges, she replied:

> No. I think they just give me stuff that I learn from… the comments or everything that they've given me, to take and learn, to fix the issue I had, just to make it better. It's not about winning. It's about the experience. I don't think it's necessarily important to win, as much as it is about the experience that you had.

For Nicole, competition is about the experience of performing and improving. She values a positive experience over the win. She later referred to winning as "the icing on the cake. You get wins and you get losses, but you take it all as constructive criticism." I asked her if it was really true that she could be happy if the band came in last place at a marching competition, and she said that she really thought that she would. As she stated

before, she puts a greater emphasis on the quality of the experience than the reward as a contingency to her happiness.

I asked her to quantify the issue of rewards. On a seven-point scale of importance to her, she said that winning an award is "probably about a one," and that doing a good job is "maybe a six or a seven." This is consistent with her scores on the autonomy subscales in her survey. Nicole also indicated that being around other people in the ensemble is very important to her, and it is a key contributor to her positive experiences.

Nicole finds value in other aspects of the experience, and she described how band provides a unique experience that she could not find elsewhere. She elaborated:

> I think it's somehow the whole experience of band. That's what I want to do with my life. It wouldn't be right not to have band. That's what I've been wanting to do with my life since sixth grade when I started. The whole aspect of band is very important, and if it wasn't here, I don't think that I would be right…. I'm definitely going to graduate from high school and go to college and become a band director so that I can share my experiences with other people. Hopefully I can inspire them to do the things in band and get as far as they can and as far as they want to.

Regarding the value that other students find in band, she asserted:

> They still have the experience. They can grow up and say that they played an instrument in high school. If they have kids, they can inspire them to go into band. I guess the whole musical thing going on is passing it from generation to generation.

These views strongly depict a student that values personal relationships and her overall experience in band. Band is a valuable and indispensible activity for her, and she sees band members as having a considerable influence on other people's participation in band. When asked to score herself on the value she places on band, she simply said, "a seven."

I asked her if watching a performance could be just as exciting as being a performer in the band. She indicated that it might be exciting, but she would not be able to have the same impact on the crowd as should would as a member of the band. Belonging to a performance group is key to her experience. Regarding her connection to others in the group, she indicated that she was "probably a six or a seven." She elaborated:

> When you're in a group, you're almost immediately accepted in a way, because you have the same interests as those people in the group…. When you're new, they welcome you and help you fit in. If someone is picking on a band member in the hallway, you stick up for them. You also help each other with the music you're making. If someone just walks in the band room, they can't necessarily help you. It's the connections that you have because you're in band… it just happens.

This perspective shows a valuing of people and relationships. I asked her whether she felt that everyone in the band shared this perspective, or whether there were people in the group that didn't feel as connected. In such situations, she tries to help other people fit in.

Regarding pressure and tension in band, Nicole considered where she would score herself on the spectrum. She described:

> Probably a 3 or a 4. It's not the most stressful thing in life. I think that you can be physically stressed out in the heat, for example, or mentally stressful if you're in concert band and you can't get a rhythm down…. I think, a lot of times, it's coming from inside. Directors get stressed sometimes and put pressure on the students, but most of the time it's coming from inside…. I don't think it really matters what people think of your music. I think it's just what you get out of it.

Her view of pressure demonstrated an autonomous orientation to regulation, which coincides with her RAI score. She continued:

> I'm definitely a seven in the internal. You can't do something just to make people like you. You can't change yourself to make people like you. You shouldn't do something if all you want is a reward…. It's about making yourself better and to help the group to be as best as you can. If you don't get a first place trophy, you can always do better next time. It's not one of those things that is really important in order to get the whole experience.

Nicole talked about how many of her pressures come from inside herself. She sees the quality of her experience as her own responsibility, and that it is not determined by the outcome of comments or judgments from other people, from trophies, or from negative comments from the director. Also, the numbers that she chose to portray her place on each of the scales is consistent with the scores that she reported on the questionnaire.

Overall, Nicole takes an intrinsic approach to her experience in band. It appears as though this approach satisfies her interests and needs in her band experiences. She does not feel a lot of stress from others, because the value of her experience is not contingent

upon the values and judgments of others. She primarily assumes autonomous regulation, and she views feedback as a way to inform her about way that she can improve her experience.

Discussion and Refinements

The interview with Nicole provided a context through which a deeper understanding of the motivation factors could be gained. She described experiences that were important to her, and despite being challenged on her perspectives several times throughout the interview, she stood firm on her descriptions. All of the interview respondents provided valuable information about what these factors look like in the band context.

In the main study, the interviews followed a similar format. Focus was refined by conducting correlation and regression analyses on the questionnaire data, which helped to identify points of interest in the factor model. Such relationships were examined in semi-structured interviews, and additional themes were reported as they emerged through coding and analysis of data in the main study.

CHAPTER 7: INTERVIEW RESULTS

Nine subjects were chosen for interviews in the main study. Initially, only six subjects were going to be chosen for interviews: those with the three highest RAI scores and the three lowest RAI scores. In addition to those six subjects, three others were chosen. Two of the additional subjects provided free-response answers on the questionnaire that represented opposite ends of the spectrum of engagement in band. For example, one said that he hoped to be a band director some day, while the other wrote about how he wanted nothing to do with band ever again. By looking more closely at these two subjects, I hoped to develop of picture of how these two students viewed their band experiences, and how they came to decide on their plans for future involvement.

The third addition to the interview phase is the twin of one of the original six subjects. During the recruitment process for the interview phase of the study, one of the band directors mentioned that a student on the list had a twin brother that played the same instrument, was in the same band, and sat next to his brother in class. One twin was initially selected and the other was not, which indicates that although much about them is identical, their questionnaire scores were not. The twins provided an opportunity to identify specific experiences in the environment that influence each of them differently.

Table 7.1 shows scores for all nine of the interview subjects on the main motivation factors extracted from each subscale on the questionnaire. The table displays subjects in rank order from highest RAI to lowest RAI (i.e., regulatory styles ranging from the most autonomous to the most controlled). Kip, Jill, and Traci have the highest RAI scores from the main study sample; and Luke, Charlie, and Nikki have the lowest RAI scores from the main study sample. Dave, who wants to be a band director, and

Cliff, who wants nothing to do with band in the future, will be compared to each other; and John will be compared to Charlie.

Table 7.1

Motivation Scores of Interview Subjects

Subject	S	A	C	R	I	E	V	P	RAI	POTAS
Kip	A	6.0	6.3	6.7	6.7	6.8	6.6	1.5	4.2	6.8
Jill	E	5.8	6.8	7.0	7.0	6.6	6.0	5.3	3.7	7.0
Traci	B	4.5	5.0	5.2	4.8	5.2	6.3	2.8	3.7	5.3
Dave	A	5.3	5.3	6.0	6.0	6.4	7.0	2.0	3.5	5.8
John	A	3.0	5.5	4.8	6.8	5.2	6.4	2.0	-0.2	5.5
Cliff	C	2.8	2.3	3.8	2.0	3.2	1.0	4.0	-0.2	6.8
Luke	C	4.8	2.0	5.5	1.5	1.8	2.6	2.3	-3.0	2.9
Charlie	A	2.5	4.5	4.3	3.3	3.6	2.6	4.5	-3.5	1.9
Nikki	C	6.3	4.8	7.0	3.7	1.6	6.6	1.0	-4.5	6.2

Note. S = school, A = autonomy; C = competence; R = relatedness; I = interest-enjoyment; E = effort-importance; P = pressure-tension; V = value-usefulness; RAI = relative autonomy index; POTAS = perception of teacher autonomy support.

In the following sections, each subject will be described in terms of how they view their band experience, and in many cases, how they interpret their participation in terms of the main factors studied in the questionnaire. At the end of this chapter, I will discuss comparisons between subjects and additional themes that emerged during the interview phase of the study. As will be discussed in greater detail, the interview transcripts were coded to identify relevant data that could help explain how each student experiences high school band. Students were offered the opportunity to revise their answers or provide additional information that they felt might help provide a more complete picture of their experiences, but none of the students made alterations to their interview responses.

Autonomously Regulated Subjects

This section reports the results from interviews with the three students with the highest scores on the LSRQ. Kip, Jill, and Traci have the highest RAI scores, and based upon self-determination theory, they were identified as the most autonomously regulated subjects from the Phase 1 questionnaire results. Their stories follow within this section.

Kip

Kip is a student at School A, is a percussionist in the top high school band, and belongs to his own rock band. He has a rich background with music, including helping his dad with a professional soundstage business, Suzuki violin training, guitar and piano lessons, attending the Interlochen Pathfinder School for two years, and participating in several high school music organizations. His parents have sent him to many Montessori schools in the community, and he seems to have had a variety of experiences that have helped him develop strategies to make friends and adjust to different social situations. He describes his initial experiences at Interlochen, for example:

> They were all sort of second-generation wealth. They have money, but they didn't necessarily have to work for it, so they sort of have this sense of entitlement. They were close and were together since kindergarten. I was sort of the outsider coming into the situation. So, socially, I had to work at it a little bit, but it turned out OK.

I asked Kip how his experiences at Interlochen compared to his experiences in a public high school band program. He described his background has having "the weirdest experience, musically. Not bad. I love it. The first semester I did marching band, which was cool." He continued to describe the social benefits of belonging to the marching band as a freshman, saying:

> If you're going to be a freshman, it's great, because you go to band camp and you get to know people, and on the first day of school, you know people. I love that, because I was scared witless of what the social climate was going to be like, would I have friends, and la dee la. My fears were not exactly accurate. There are the music kids, and some think that they're all band geeks, but really it's cool, because there's a whole range of kids…. I hate to say this, but you have some bullies and you have some geeks, but they're all friends. Some of them can be jerks to other people, but they all seem to be, I don't know, they're all friends.

Given Kip's experiences, it may not come as a surprise that his RAI score, at 4.2, was the highest of any subject in the study. Likewise, his psychological needs scores and intrinsic motivation scores were also high, while his pressure score was one of the lowest in the study (1.5). Kip is self-regulated, feels confident in his music abilities, and gets a lot of enjoyment out of being in band.

When asked what he enjoys most about band, Kip spoke predominantly about his rock band experiences as an indispensible part of his music life. He talked about the satisfaction he gets from constructing and creating musical experiences, saying:

> I write most of our stuff. You can fiddle along and play stuff yourself, but when you play with other people and have that element of different instruments, and different notes and harmonies, it gives it this whole feeling, this whole aura, and I just love that rush. It's kind of like in one of our songs, everything drops out and this one person builds back and ends in this one harmony, this one note… there's the tonic, with the third above and the octave and the fifth, and it's all there, and it

rings, and you can feel it, and right there I just get a rush. I get chills down my spine.

In his rock band, Kip gets to choose the types of experiences that he has, and for the most part, gets to decide who is in the group and with whom he makes music. When I asked him to be more specific about what he likes about his school band experience, he talked about how school music fit into his life. He said, "It's nice to have something you're passionate about, for the most part. Some people do it because their parents make them." His parents play a large part in his participation, but he is not required to be in band. Regarding choice, he said, "I'm willing. I love doing it. At first, it sort of had to be like, 'come on, you should do it.' And, you know, I'm not ashamed to admit that it was a good decision. I loved it."

While in band, however, students are required to participate in certain activities. Since Kip's school band program competes, I was curious as to how he would describe his experiences with competition, so I asked him to describe the typical marching band competition. He said:

> It's cool, because we all go to another college or university. It's cool, because we all pile in the bus. We pack up our stuff and pile in… we drive out there, and we all hang out on the way there. I mean, if you asked a band kid what their favorite part of the competition is, they would say the bus ride. We get wild. Not bad wild, I mean. Kind of like in *Napolean Dynamite* when he throws the little toy character and is dragging it behind… Superman!... but it's fun.

He went on do describe how great it is to be able to spend time with friends and to have a new performance venue each weekend. He spoke extensively about the joys of

performance, recalling funny stories of memorable things that happened in the middle of competition performances. Regarding the competitive element of band competitions and his competitive approach to other activities, he said:

> For me, I'm sort of an exception to the deal, like with winning and people that get really competitive. I'm not really competitive, like, at all. I love going to competitions, I love being able to see other bands, and being able to show them what we've got. But if we don't win, it's not like, "oh man, it wasn't any fun. It's only fun if we win." I have fun no matter what. I have fun if I'm getting smeared, like if I'm playing video games with someone. Like if I'm playing Halo, and if they have 18 kills and I have negative 2 and I've killed myself twice, I'm still having a blast. I'm still enjoying being with other people, enjoying what we're doing, and it's so fun.

As the self-proclaimed exception to the competitive "deal," he acknowledged that other students do not necessarily respond the same way to competitive outcomes. He added:

> I don't want to say that I'm the only person that's like this, but I know a lot of people that are like, you know, if they don't win, they are down in the dumps the rest of the bus ride back. It's miserable. For me, whether we win or lose, we're still doing the same thing, we're still going to play again, and we're still doing what we love.

With such an easy-going approach to competition, I wondered if he just had lower standards than other students, so I challenged him to describe what matters to him about a competition. He reiterated that it is a place where students can do what they love, adding,

"there's a certain satisfaction in doing well." Since a primary concern of this study is whether students are regulated from within or from outside themselves, I asked him to define what it means to "do well." He said:

> Doing well is sort of in our minds. Did we do our best? Did we do what we could have done? Did we do what we did at that last rehearsal that was amazing that just clicked? If I make a mistake, the judges don't know. It's all about what you think, you know? For me, doing well is doing what you love doing, and when you're done, you get a feeling inside of satisfaction.

Kip focuses on judges as a way improve himself, rather than using people outside himself to define his experience in some way. He said, "I don't think of them as they're judging me, but I think of it more as constructive criticism." Kip seems to have an understanding that people view performances and competition in different ways from one another. He had some concerns about how others sometimes viewed competition performances, saying that, in comparison to his answers:

> They would probably cover up a little bit and say something similar to what I said. I'm not saying that they do it because they want to win. I'm sure they still love the music and they still love doing it, but for some people… do you know what I'm talking about? For some people, if they're not winning, they're not enjoying it… if they're not coming out on top, you know?

Kip repeated some of his views on competition when we talked about how much pressure he feels. On a scale from one to seven, he said that he was "probably a one or a zero" for pressure. He describes himself as being concerned about how he will do at something, but that he is "not going to sit here and have a nervous breakdown any time

soon." I asked Kip what made him different in this area, and to describe what he thinks is going through other people's minds. He said:

> [They are] pretty high-strung people. Maybe it's how they deal with stress or something. They just sit there and think about it and worry about it…. I'm sure that some people think that I don't really care about band, but I spend so much of my free time thinking about it. If something goes wrong and we lose, and we came in ninth out of ten, and I'm like, "we'll do better next time. That was our warm-up. We'll rock them at the next competition." People are like, "you're kidding me, right? You don't care! We were pathetic, we failed, and we could have done better… dah, dah, dah." I wish I had a time machine, but I don't. What is done is done.

For Kip, competition and feedback from the judges is a "a way to make [himself] better." In this way, competition is something that can inform Kip and other students how they can improve their performance, learn new skills, and get new musical ideas by listening to other groups perform and by talking to people from other schools. When thinking back about whether any of his previous experiences might have shaped his views, he said:

> I have to say that one thing that I think has affected my opinion of competitions is that I've sort of grown up on stage. I've grown up setting up stages, being on stages, and I don't get stage fright. You know what I'm saying? Some people are more affected by performing in front of people. I don't know why that is. I wish I did. Maybe it's that they're worried about what people are saying, maybe they're

not quite as competent in what they're doing, or they're not exactly sure what they're going to do.

He said that he has "had that problem" in the past, but now, unless people are giving him feedback that will help him, he is not too concerned about what other people say. I asked him whether he could still enjoy band if that was not the case, and what he would say about a course in which grades were emphasized over the music, and also if there were a situation where grades were determined by the outcome of competitions. He joked that:

> We would have had really bad grades in marching band last semester. I wouldn't like that at all. It would make me seriously rethink band, because it would become a very, very hostile environment. It would not be a comfortable place for me that I can actually enjoy doing what I'm doing. I had somebody tell me that music is not about enjoying it, it's about doing it right.

When asked whether that was just a different way of viewing things that could also be valid, he said without hesitation, "There are different kinds of people, and they think differently. I respect that. They are allowed to have their opinions, but I'm sorry. I can't agree with that one. I politely disagree."

Throughout my interview with Kip, it was apparent that he has had a variety of experiences with music that have shaped the way he views his participation in music. He attended several different schools, has family members who are involved in music careers, and is supported in his participation in music activities outside of school by his family and friends.

Jill

Jill is a freshman flutist in a small high school music program (School E). She is originally from Korea, but now lives with a family in the United States while she attends high school. She also spent her third grade year in the United States while her father had an academic appointment at the local university. During that time, she grew close to her English tutor, who is part of the family with whom she now lives. Her introduction to music came during third grade when her tutor used songs to help her get over her shyness while learning English. When Jill went back to Korea with her father the following year, she became interested in the flute when she saw a family friend playing it one day, and she immediately fell in love with the instrument.

Musical studies are important to Jill's family. For example, each of the children in her family was expected to go to a piano academy during their early school studies. She said the following about her piano academy experience:

> I went to piano academy. There are a lot of piano academies in Korea. So, my mom thought piano was the most important instrument you should play, and my brother went to piano academy for a long time. I went for two years.

She did not get to study flute while at the piano academy, however. It was too expensive for her family to afford private lessons at the academy, so she waited until several years later. Later, she was able to start private lessons with a flute teacher and with a professor at a different academy. In her experience, she explained that she:

> [R]eally didn't do performances. I used to go to my teacher's house to play flute, and then I quit her place, and then went to this academy where there was a professor. He didn't like my way of grabbing the flute or tounging, so I just quit

> that place too. My former teacher taught me wrong, so I tried to fix it, but it was hard to do automatically.

Much of her flute study was self-directed, and she became frustrated that her teachers did not seem to have the patience to help her relearn some of the skills that she felt she had improperly learned on her own or from her first teacher.

Private flute lessons in Korea, as described by Jill, appear to provide contrasting kinds of experiences and learning environments than what we envision as similar contexts in the United States. Performing is also different here, as Jill described:

> Like, [here] you have a real audience, like, listening to the band. In Korea, everybody has to study, so if you don't go to music school, and you just study, you don't really have band performances in school. This is my first time performing in front of an audience.

Jill explained that performing in front of an audience makes her nervous sometimes, but is really fun. Since she tied for the second-highest RAI score on the survey (3.7), I was curious about where her nervousness comes from and what she finds fun about performing in her new school. Regarding her nerves, she shared, "I don't really have stage fright, but sometimes I miss a few notes, and that [makes me] kind of nervous, that people would figure out I missed a few notes." She added that she really was not afraid of being embarrassed, but she really wanted to make sure that she was prepared enough for her performance in order to play a piece as well as possible.

Jill also spoke a lot about her music experiences with her former English teacher. She really enjoys the opportunity to perform in casual settings and to learn more about her instrument and about music. She described some of these interactions as:

> Really fun, and since she can play the piano, she can practice with me, and I think that's really cool. She also plays the accordion. When I get older and have kids, I can play with my kids. I think that would be a really cool thing to do.

I asked her if her mother or father played instruments, and whether she had ever had the opportunity to play instruments with her family. She said that she had not, but that her mom thought that playing an instrument would be good for her, and that most Korean moms do not agree with that. She added:

> They think you should just study. They send their kids to piano academies until middle school, and then everyone quits. If you're not going to music school, then you just have to study…. She thought I should come to the U.S. for high school, and high school kids mostly play some instrument, and she thought it would be better for me to play an instrument.

Jill also highlighted some stories about arguments that she witnessed between her mother and her brother. She said that her brother really was not a "study guy," and that since the high school pressures were high in Korea, her brother stopped speaking to their mother for a long time after she tried to get him to take his studies more seriously. As a result, her mother put less pressure on her, and she encourages Jill to have a more comprehensive academic experience, which includes musical studies. Jill does not experience the same kinds of stress that her brother experienced in high school, since she is allowed to have a different kind of high school education. She explained, "playing music makes your stress go away and it feels so relaxed." She said that music has additional benefits for her too. She said:

> I can't really concentrate on one thing for a really long time, so after playing flute, it helps me get back to my studies. After playing flute… I feel relieved. We play a lot of songs, and most of them are exciting to play. In Korea, you really don't. You just do the basics. Just rhythms. You don't really play a song like we do here.

In contrast to her experience in Korea, she provided many examples of her enjoyment of playing with other people. She likes listening to the students around her in the ensemble setting, like when "the flute stops for four bars and other instruments play. I really like that. I just listen to other instruments playing, and there are harmony parts. I like that too." Jill's current high school band setting provides many opportunities that were not available to her in Korea. She views Korean music classes as very strict and limited, and she views U.S. music classes as very supportive and agreeable to her learning style.

Music competition is also a new experience for Jill. For the first time, she participated in a solo and ensemble competition, where she played a flute duet. She spoke about her experience as a "pretty fun experience," from which she could learn a lot more about playing the flute. She added that "you get to be actually judged by the expert, and practicing with another partner was also a fun experience." She acknowledged that judges played a big part in her experience at the competition, but she spoke primarily about judges as people who could help her improve. Jill said that she likes these types of competitions because music should be "just enjoying the music itself." She added:

> They don't really have competitions in Korea. They do, but then they get really sarcastic about everything. Like, you shouldn't have done this, but you did. They

say it really strictly and really sarcastically. Like, they could say it nicely, but they don't.

Jill's scores on the questionnaire, in addition what she said during the interview, captured nicely the way that she views her music experiences. She enjoys activities that provide the means for her to learn new things and allow her to be independent of too many external influences, which have gotten in the way of her enjoyment in the past. When I explained the nature of my research to her, I asked Jill to think about how she would score herself on each of the constructs that were identified in the questionnaire. Her scores coincided with the questionnaire results. For example, I asked her where she would fall on the spectrum of intrinsic and extrinsic motivation. She said that she thought she would be around "a zero, because I'm over here [pointing to the intrinsic side], but my mom thinks grades are really important." I asked her if she tried to get good grades to please her mother, and whether that had any impact on how she makes decisions in band. She said, "No, I would be more on the intrinsic side," later adding that:

> That's a no stress zone. You just enjoy the music itself, and you like to play music. I think that's the most important thing when you're in band. The extrinsic side would be like, it's strict, so you have to do this. So yah, I'm probably intrinsic.

Traci

Traci is a junior flutist in the top high school band at School B. She was a drum major in the marching band, and she performs in several music groups outside of school. She started taking flute lessons in elementary school, and then started playing in the school's concert band when she moved from an out-of-state school before her sixth grade

year. She joked, “I started band in sixth grade mainly because I wanted three lockers versus two, but I ended up being first chair flute in almost anything I did, which was kind of funny.” She described the difference between her individual lessons and the new experience of performing with an ensemble:

> It was a lot more fun. There can be a teacher, and she tells you what to work on, what to do, and how to fix this and how to fix that, but with the group of people, you’re more on your own, because the conductor is telling the orchestra or band what to do and how to fix this and how to fix that. He’s not really pointing at you and saying that you need to work on something. But if you go to your lesson teacher, she would say that.

Traci tied for the second-highest RAI score on the questionnaire. Therefore, I was interested in how she viewed certain types of interactions in class, and how she felt she compared to the other students. I asked her about what it would be like for students if the director went down the row and had everyone play something, and single them out from the group. She explained:

> It depends on the person. Some people, it would really help, because they don’t get the luxury of private lessons. Some people would probably get really nervous because you would have to play in front of the whole band like a solo, and they’re probably not very confident on their instrument.

Traci continued to explain how she might be nervous, but only because she would feel like she would have to show people how to play something. She added that “it really doesn’t matter that much. It’s just a whole big family. If you mess up, it’s not like people are going to stand up and laugh at you and scorn you for the rest of your life.”

For Traci, playing music by herself for the group is a way of helping the group grow musically, rather than as a means to show off or as a situation where she would have to try to avoid embarrassment. As we talked, she explained how performing with other people brings her enjoyment, and that she does not feel much pressure while in band. I asked her if there is something specific that her director does to motivate her in band. She explained that she is motivated by "the sound." She recalled one of her first experiences in a large concert band:

> It was extremely beautiful and rich and amazing. So, now I am always reaching for that sound. I like working towards that, to make an ensemble sound like that. I guess it's not something my director did, but it's something that I heard.

She also explained how some directors can use threats, and how sometimes it can decrease the students' motivation if a director talks down to the group. She does not think that it is productive for teachers "to baby people around… to talk in small terms, so you can understand… so you don't feel like you have to rise to his level."

Traci described her vision of the ideal ensemble experience. She focused on specific skills needed to make music, the cooperation of others in the groups, and mechanics of the music itself. When I asked her what it would be like if she could not be in band, she said that it would be "almost devastating, because music puts so much into my life." I asked her if there was something special or unique about an ensemble. She explained:

> It's like a painter getting only red to paint with, versus having a million colors they can put into their painting. Sure, the painting can be beautiful. Some things

would be nice, but then if you add more and more colors, you have more and more to think about, more and more to do.

I suggested that a person could record something, and then layer tracks of different instruments together, which would add many colors, but would not require interaction with others. She replied:

> If you're playing in an ensemble, then there's lots of people there contributing, and they all have their own special color. If flutes are blue, one can be dark blue, one can be light blue, and each person puts their personality into the instrument. They play something lyrically because it reminds them of something. People have their different flair to them, something you might not have. One can play low notes with a huge rich sound, and another one can play the high notes really nice and open and beautiful without being screechy. Each person has their own strength, and if you really listen, they have different feelings that come into the music.

In Traci's experience, music-making itself is the most important part of her participation in school ensembles. She tries not to focus on making comparisons with other students, and she does not consider herself to be very competitive. However, she does participate in band competitions and in solo competitions, both in school and on her own. She described what she felt was the point of music competitions, saying that she likes the judges' feedback, which helps her to improve her performance skills. Regarding what she thinks about while competing in front of a judge or against other people, she said:

> [I] just try to realize that I'm playing music and this is what I love. I shouldn't be worried about this, because if I'm worried about this, I'm not going to do well… versus saying, you know, she played better than me. I have to play it better than her. Then, your mind switches to technical mode, versus the musical mode.

Throughout our entire interview, it seemed as though it was a priority for Traci to explain that there is something personal and special for her about performing music, and that the experience would be less valuable to her if there were external pressures and other non-musical elements that would distract from the process of making music. When asked the same question as the other subjects about where she felt she would score on the RAI, she indicated that she would be "about a five." She attributed a score of 3.6 on the questionnaire as including her occasional attention to grades and parts of the competition experience, adding, "I would, personally, like to say that I like the feeling more when I'm on this side [pointing to intrinsic]. I love the music a lot more, and feel a lot better with everything when I'm on this side."

Control Regulation Subjects

This section reports the results from interviews with the three students who had the lowest scores on the LSRQ. Nikki, Luke, and Charlie had the lowest RAI scores, and based upon self-determination theory, they were identified from the Phase 1 questionnaire results as using predominantly controlled regulation in band. Their stories follow within this section.

Nikki

Nikki is a flutist in the third of three auditioned bands at School C. She started playing string instruments when she was in the second grade, started saxophone shortly

afterward, switched to flute in the fourth grade, made another switch to trumpet in sixth grade, and then back to flute before seventh grade. Regarding the switch from strings to band, she shared, "strings was pretty difficult, but in band, it seemed like we played [pieces] like Harry Potter, and I tried harder because I knew the music." When asked about the multiple switches among band instruments, she recalled:

> The trumpet was switched because one of my best friends played it, so that was kind of a stupid switch. And the saxophone, I guess that if I could switch now, I would still go to saxophone, but I'm just too experienced in the flute to switch. I like the saxophone, but I'm kind of into the flute now, I guess, just based on years…. I'm really only in the high school band because it looks good on a college application.

This initial description of her music experiences begins to explain some of her scores on the questionnaire. For example, she scored moderately low for Interest (3.7) and considerably low for Effort (1.6). She explained that she switched instruments based upon what her friends were playing at the time, and felt that she needed to stay on her current instrument because she is "into the flute now… based upon years." Also, she has stayed in band because of she feels it could be useful to her in the future for non-musical reasons.

In contrast to the high-RAI subjects, many of her descriptions of her time in band are filled with comparisons and her preoccupation with procedural aspects of the program. She shared:

> For instance, if there's a solo in the piece, the person who should be playing the solo, the first chair player, we don't. It started out just me playing it, and then the

third chair one played it. She just asked, and she got to play it, and then, it just kind of went from there. They're my friends. I don't want to make it look like I want the solo.

For Nikki, being first chair and playing solos is very important, but she is careful not to compromise her friendship with the other members of the flute section. She feels that she is the best player, and therefore, the director should insist that she plays the solos. She also feels that the band should play harder music, because harder music would make her practice more at home. Regarding her current practice routine and the value of playing music outside of school, she explained, "It's not that important. I've gotten worse in my flute since middle school." She feels that she is good enough to play the level of music that the director has been choosing for the band. Since hard music provided motivation for her to practice in the past, she does not see much reason to practice now.

As a freshman, there are many things that Nikki is experiencing that are different than her middle school experience. For example, she described her former band director as "kind of stricter. I was practicing until eleven o'clock every day. That was so hard." She spoke with admiration about her former director and her middle school band experience. When I asked her about what was the most enjoyable thing about being in band in middle school, she simply said, "the solos." She liked the fact that her middle school director gave the band what she considered to be difficult music, and liked that she was recognized for her efforts and praised for her performance of solos in the band.

Nikki explained how her outlook on band is similar to her experience in sports, also speaking about how she focuses on the criticism of others. She said:

> Every time before a concert, when I have a solo, I kind of think like I'm at a tennis match, because I'm a tennis player. I try to picture it, because there you're by yourself. Here you're with more people, but you're still by yourself. I just really want to prove that I can do it and not mess up. So then, when I'm done with it, it's like you've accomplished something.

She explained that she has to prove herself to the other students, but also to the parents in the audience. She said that her parents do not really care about music, but "the other parents at the concerts… they criticize a lot of things. They lose the sense of music, and they look at the faults." In comparison to other students who are more easy-going about these types of influences, she explained, "I guess it's just like personality, because when I do something, I want to do it right. Some people, they're just in it. They don't care much." Nikki also elaborated on her long list of academic achievements and involvement in sports, including her enrollment in an online university course at a large private school in the Midwest. She is proud of her achievements, and she feels that her busy academic and activity schedule will be impressive to college admissions personnel in the future.

Despite the fact that she anticipates that her band participation will be valuable to her in the future, she is still considering quitting after this year, and her mother has actually tried to convince her to quit. She has stayed in band because of her friends and because she wants to add it to her college application, but she is frustrated because:

> It's not competitive. It's not. I don't see much of the benefit. If I was in middle school band, I wouldn't have quit, but I think I've gotten worse here, so I'll probably still be getting worse, is what I think.

Nikki's descriptions of her experience reinforce her RAI score of -4.5 on the questionnaire. She also has many friends in band, which is reflected in her Relatedness score of 7.0. Her friends have been an important influence in keeping her in band, but also seem to have decreased the likelihood that she will act on her competitive needs. Coupled with her opinion of the director's choice of music and the limited opportunities for her to demonstrate her skills, she does not practice, gets less enjoyment out of band than she has in the past, and is considering quitting altogether. Additionally, Nikki was clear about the fact that she will not be playing flute again after high school. She summed up her perspective on her future with the flute as:

> I think if I don't quit next year, after high school, aside from really listening to my music, I'm not going to be playing the flute. I liked it until high school, and then it became something that I had to do, rather than wanted to do. I want to get into Johns Hopkins, so that's a lot of competition. So, you pretty much need anything you can get. I'm not into drama, so this is the alternative. [It is] a nice character deal.

Luke

Luke is a junior horn player in the third of three auditioned bands at School C. He started playing horn in the fifth grade, switched to trumpet in the sixth grade, and then switched back to horn by the end of his sixth grade year. Regarding the switches, he said, "I didn't really get the hang of the horn mouthpiece, and I didn't have a good experience with it. [Then] I wasn't very good at the trumpet, so I switched back to the horn." While in high school, Luke has been in all three of the bands.

Luke has had many music experiences in which he was intrinsically motivated, but he feels that his participation in the school band is very controlled, uncomfortable for him, and makes him participate for reasons other than the music. Music choice and control over his experiences seem to be a large influence on his interest in band (see scores). He does not feel pressured, because he does not feel challenged. Therefore, he creates his own experiences at home, which satisfy his needs. At home, Luke gets to choose his own music, create his own pieces, and be in charge of his learning on guitar. He also sees guitar as something that will be useful to him in the future, and as something that will allow him to express himself. Regarding his guitar studies at home, Luke explained:

> There's the freedom that you have of picking your own music, and the emotion that goes with actually sitting down and looking at it and hearing, "I want to play this, and I don't want to play this," or "This is what I'm looking for, and this isn't." Being thrown a piece of music, it could be the exact opposite of what you want to play, and if it's not what you want to play, you don't want to take your time and actually play it well.

He explained that it is very important for him to be able to choose the music, and that has had a large impact on his practice schedule with horn. He never takes his horn home, and he devotes all of his practice time at home to playing the guitar. Luke acknowledges that he might not appear to be motivated in band, and as a result, his teacher increases his focus on grades, practicing, and a strict, business-like atmosphere in band, which makes him even less motivated. His teacher can be fun, and he really thinks that his band

director is a great person. However, he feels that the band director only provides fun experiences or strict experiences, and very little in between.

As his primary motivation in band, he points to his friends (Relatedness score of 5.5) and the trips that the group takes every other year. He added, "That, personally for me, is the only reason I stayed in this year, because we went to Florida for a week. That was the only reason that I stayed, or else, I would have quit."

Luke also cited additional reasons for thinking about quitting. He explained that the horn section does not get much attention, both in extra instruction and in having any pressure put on them to perform well in class. Other sections get private instruction from outside experts during class on a regular basis, but the horns have not had that kind of opportunity. Also, Luke and a friend in the section try to intentionally play wrong notes just to see if the director will notice, and they are frustrated that they do not get any attention. He explained that in band, there is no pressure, and in the absence of internal pressures for wanting to be in band, he feels that adding some positive, external influences would help motivate him in band. Luke wants to be asked for his opinion, have some choice in the music selection, and be recognized for his musical ideas and participation in class.

When asked about whether he felt that he fell on the intrinsic or extrinsic side of motivation in music, he said that "internal is me playing guitar and stuff," and that for school band, he's "That one [pointing to external]. A six." He said that a three on the extrinsic side was not surprising to him, since "there's a little bit of ego there." He contrasts his band and home music experiences, talking about how he might be more

concerned about how his friends and the director view him, but that he does not have that at home. He added that at home:

> It's not being better than everybody else. [I] just kind of enjoy music. What you do with it, and getting enjoyment out of it… as long as I'm having fun, it's not really the pressure of doing it right, so much as the self-satisfaction that I did what I could. As long as I think I did fine, I don't care about what everybody else thinks.

This duality of motivation highlights the context-specific nature of motivation. Luke is not very motivated in band, and is concerned with negative, external elements of the school band experience. However, at home, he is considerably more motivated, spends a lot of time playing the guitar, feels that guitar will play a large part in his musical enjoyment in the future, and is very self-motivated to listen to, learn about, and create guitar music in a variety of styles.

Charlie

Charlie is a senior trumpet player in the concert band at School A. The concert band is non-auditioned, and then there is also a wind symphony, which is the top group, and the symphonic band. Charlie is the first chair trumpet player in the concert band. He got started in band because his whole family has been involved in music. His mother and father were both music education majors in college, although they have careers outside of music now. His parents both played trumpet, his older brother played trumpet in high school, and his twin brother, John, also plays trumpet. He recalled some specific reasons for why he started playing trumpet:

> My mom tells the famous story of how she was playing an audition, and the judges put down their papers and just sat back and listened. Apparently it's pretty hard to get a judge to do that. I also started playing because of Maynard Ferguson, because he was really big.

Charlie's family seems to have a lot of influence on how he views his band experiences. Knowing that his parents were music education majors and both played trumpet, he explained how his parents have high expectations for him on trumpet. He said:

> They know that they can do so good. Also, you know, you hear about how "this is the best generation yet" and "this generation is the one that has so much more exposure to so many more things, so they can get better almost immediately." You know, it's not quite that way.

Charlie also admires his band director, and he says that it is "kind of uplifting" to know that he is a lead player in one of his bands. Being a lead player is very important to Charlie, as he explained:

> I could be second [part], but third trumpet? I just don't think third trumpet would be as much fun. It's not really a challenge, and I mean, come on. I'm a senior. If a senior is playing third trumpet, since I've been playing first since freshman year, that would give kids the impression that I'm not really trying at all.

Several years ago, Charlie remembers his director telling him that the lead trumpet player in the marching band is the carrier of the band, and therefore, has a lot of responsibility to always play well. It has taken him several years to overcome his stage fright, which he attributes to him feeling more confident on the trumpet. Regarding his fears, he said:

> I used to get really nervous because we have scale tests. I used to get really nervous because I have a real stage fright problem, which marching band also helped. Just because there's a crowd watching you, you're not necessarily alone. There can be 90 other people with you.

Comparing himself to his twin brother, he added, "I've got anxiety, and my brother really doesn't. He kind of never really displays his anxiety. I'll start shaking sometimes, but he's just kind of 'Hey, what's up?'"

Charlie shared his opinions about certain types of music, and he clearly stated that trumpet music was his favorite type of music that is not "dominated by vocals. With Maynard Ferguson, you know, he likes to blast over the rest with his big microphone. I believe that all songs should be trumpet dominated." He explained that his music tastes were influenced by his family's taste in music. His father would listen to music and talk about what he like about each piece. He felt that his taste in music and his instrument choice were pretty much decided for him. He explained that since his whole family played trumpet, they felt that they were in a good position to help him while he and his brother learned too.

His friends have also been an important part of his band experience. Charlie has many friends that are not in band, but he mentioned that his very best friends are in band, and that it is easier for him to relate to band students. His friends are an integral part of his experience on band trips and competitions too, saying that the bus rides are "legendary." He loves playing music, and he loves being with his friends, but he said that the best part of going to a competition is:

> Being able to celebrate. We won grand champion a couple of years back… everyone getting to celebrate with your friends. We can celebrate with the band director too. We can play games with him. But, by far, the best part is being able to really say, "Oooo, we're better than them!"

When I asked Charlie what he thought about people who are not as competitive as him, he commented, "they're just asking for an easy grade, you know, because of the system we have. You can't grade someone on their improvement or really their skill" if the other students are not competitive.

After high school, Charlie would like to attend a community college in the area, and plans to join the band. He does not plan to make trumpet a big part of his life, but he shared that "I don't think I could just put my trumpet away and say, 'that's the last time I'll see you. Goodbye.'" When I described how positive it has been for me to perform after high school and after college in community groups, he responded, "Well, then you're going to have to watch out for me, because I'll probably take your chair." This competitive drive also extends to his long-term academic and careers goals, and his impression of what it will take for him to accomplish those goals may be influencing his future college plans. He wants to be a geologist, sharing, "I don't want to just settle for being a nobody in the geology field. I want to be the best of the best, so I'll probably go out of state."

Charlie spoke more about his competitive drive, his opinion of non-competitive people, and how he feels that people look up to him because of his skill and competitive nature. When asked to respond about whether he felt that he was more intrinsically or

extrinsically motivated in band, he indicated that he felt that he would be more on the extrinsic side. He added:

> I would be surprised if I were a six or a seven [on the extrinsic side]. I want to be, ideally, probably a one or a two, so I'm not completely a bad guy, showing off, or doing it for grades. If you really like something, your potential is going to sky-rocket, compared to if you don't like it.

Charlie feels that being completely extrinsically motivated is not a good thing, but that extrinsic parts of the experience are very important to him. Many of the stories that he told during the interview were about great players, role modes, stories he heard from other musicians, and about how he would like to be viewed by others like he views his musical heroes.

Charlie's Twin Brother

John was asked to participate in an interview because his scores on the Phase 1 questionnaire were not consistent with his twin brother, Charlie. This section reports the results from the interview with John and a subsequent interview with John and Charlie together. These interviews highlight important personality and motivational comparisons between the twins.

John

John also plays trumpet, and he sits next to Charlie in the concert band. John is a quiet person. He is more introverted than Charlie, and he has a much more easy-going approach to his participation in band. He considers himself to be somewhat motivated in band. For John, motivation comes from a variety of places, including wanting to play something right, having fun while playing music, and sibling rivalry with his brother. It is

not surprising that his RAI score was nearly zero (-0.2), because he describes a combination of internal and external reason for his effort and performance in band.

John thinks of himself as a perfectionist, and when he does not do something well, he gets frustrated with himself. One example that he shared was, "sometimes I think I play too loud, so I cover up all of the other trumpets. It sort of makes me feel like a glory hog." On one hand, he wants to make sure that he plays appropriately for the sake of the music, but on the other, he wants to make sure that he does not look bad to the other students.

Regarding competitions, John spoke about how fun and interesting it was to listen to all of the other bands at the competitions to seek what kinds of things they are doing on the field. He explains the experience of performing at a competition as "euphoria. You just feel extremely happy." Since Charlie is quite competitive, John offers an interesting comparison. For John, competitions are not about beating the other bands, but rather to get comments from the judges. This sometimes causes some conflicts between the brothers, and John describes what it is like to be in the same band with Charlie as "sometimes very annoying." He cites sibling rivalry as the main source, explaining how they sometimes try to be better than each other at high notes and other technical skills on the trumpet.

Following my individual interview with John and Charlie, both of the brothers were available to be interviewed together. At the beginning of the combined interview, Charlie dominated the conversation and answered many of the questions for both of them. They outlined the similarities and differences between them, and they explained how they function as individuals and as a team while in band. For example, Charlie might

be better at something than John, and John might be better at something than Charlie. They explained how it can get annoying that people sometimes assume that they have a shared set of skills and personality traits, and they work hard to establish and maintain separate identities. Charlie pointed out that he could not figure out why people had so much trouble with identifying each of their unique strengths, because he felt that he was much better looking than his brother.

John and Charlie talked through all of the ways that they are different in the areas of physical strength, intellectual accomplishments, and musical tastes. As they spoke, it was apparent that they complimented each other well. In terms of motivation, Charlie is very extrinsically motivated, and John is more easy-going and is motivated by intrinsic and extrinsic influences at different times. Charlie said that John is more competitive, but he when he explained John's competitiveness, he talked about how John would encourage him to take the solos and to be first chair. Even though Charlie sees that as competitiveness, it demonstrates a situation where John avoids competition with his brother by encouraging him to be competitive with others. Their band director described Charlie as being very competitive and motivated in band, and mentioned that it seemed like John was really mellow and was in band just to be around his brother. Although it seems that there are also other reasons for John's participation in band, it seems as though he has a close bond with his brother, and the friendship with his twin is an important part of his band experience.

Subjects with Contrasting Long-term Goals

Two of the additional three interview subjects were chosen based upon contrasting responses to the open-ended questionnaire items, one of which asked what

role they thought music might play for them after they graduate from high school. Cliff and Dave are freshman tuba players from two different schools, and they have vastly different interpretations and stories about their band experiences. Cliff does not plan to participate in any band or music activities after graduation, and in contrast, Dave plans to be a band director. The next two sections contain descriptions of their experiences, and a section in Chapter 8 provides a discussion of the differences between the two.

Cliff

Cliff is a freshman tuba player at high school C. Like some of the other subjects in this study, he also switched instruments a few times before playing tuba in high school. He started playing violin in fourth grade, and since he did not feel like he was good at it, he quit after one year. He then joined band, and started playing horn in the fifth grade. Horn was also too hard, so he quit halfway through the year. In eighth grade, Cliff played horn in the band again, and then joined the high school band at the beginning of his freshman year. He recalled, "It's just something to do, something to keep me busy. It started being more and more fun, and I'm getting better and better at what I do."

After a year in the high school band, Cliff really enjoys his experience. His friends play a big role in making band fun, but he also said that other people are also the least fun aspect to band. Cliff has a bad temper, and he gets mad when people brag about their abilities and talk about how much better they are. His greatest motivation in band often comes from "being able to be better than someone that said that you couldn't be better than them. I want to show them that they're not [as good]."

In the beginning of the interview, Cliff mentioned that track and field sports were some of his main high school activities, and he hoped to be a state pole-vault champion

like his grandfather. He enjoys activities in which he feels competent and can be competitive with others. In band, he feels less competent (2.3 out of seven on the questionnaire) than in other areas (e.g., academics, sports), and although he is still somewhat competitive in band, he does not have the same level of motivation as in other areas. One possible explanation is that he does not place much value on his band experience. He responded on the questionnaire that band has a value of 1.0 on the seven-point scale. Band is something that he does to pass the time and to be with his friends, but he frequently quits music activities if he does not feel as good as others or as though he is progressing as quickly as he can in other areas of study. Coupled with the frustration and pressure (4.0 on the questionnaire) that he feels from negative interactions with competitive peers who feel more competent than he does about their abilities, he sometimes feels like quitting.

Cliff gets satisfaction when he gets opportunities to feel competent and to feel like he is improving. One such opportunity is competitive marching band. He shared, "Competitions are one of the best things you'll do while you're here, because you get to see all of your hard work put into the final product." He mentioned that keeping the final product in mind is a strategy that he has been trying lately to help keep a positive outlook on band. The other aspects of the competition are not very important to him, however. He said, "You're just waiting for your band to go, and it's just kind of like this, 'OK. Get it over with, all this work we've done. Let's just do it now and go home.'" He is not interested in the competitive aspects of the competitions, since he does not feel that competitions offer him an opportunity to get better. His interactions with others always

seem to be about how the group scored or about criticisms of how he performed. He described these interactions as:

> We don't really listen to what [judges] say ever. We just, at the end of the competition, there will be the end scores and what not, and that's about it. Then, I guess, [the director] might listen to them, and then he tells us what to do.

He added that the scores at the competition end up being the most important aspect of the competition for many people. For Cliff, playing music and having an opportunity to have a culminating experience of all of the group's hard work is the most important aspect of competing as a group.

Music choice is one area in which Cliff has become more relaxed. At first, he did not like the type of music that his teachers picked, but he has developed a more open-minded approach to playing a variety of types and difficulties of music. He says that he pretty much wants to learn any kind of music eventually. He added, "I'll play just about anything. I'll always look at something and say it's too hard or I don't like it when I first get it, but as you start, once you know it and can play it, it's fine."

Cliff does not have plans to continue playing in bands or performing on his instrument after high school, but he is considering staying in band for the next three years. I asked him what had changed since a couple of months prior to the interview, when he completed the questionnaire. He said that his mother has been encouraging him to continue participating from the beginning, and recently, "I changed my mind. I just started getting better and better, and figured I might as well stick through it." I asked him why he would stay in band if, as he said, there was little value to it. He said that his improvement has been a big influence, and also:

> Colleges look at it. For some, it's ranked higher in what colleges think of you. If you do band, and if you don't do band, the person that did band is probably going to get something over the person that wasn't in band. It shows that you work hard and that you're dedicated to what you do.

Cliff's level of intrinsic motivation (i.e., indicated by his levels of interest, effort, and valuing of band) appears to vary, depending on how competent he feels at the moment, and based upon positive interactions with others. When I asked him whether he would place himself on the intrinsic or extrinsic side of regulation, he said, "right down the middle." Subsequently, after learning of his score of 0.2 on the extrinsic side on the questionnaire (i.e., RAI score of -0.2), he said that he was not surprised, and that it sounded exactly like where he had placed himself.

Dave

Dave is a freshman tuba player at high school A. After high school, he wants to be a band director. He is highly involved in his band program, and told several stories about what it was like to perform in certain venues, his favorite teachers, and what it is like to play tuba in high school. He spoke of past directors that tried to make sure that he had a great experience and showed him that he has the potential to be a great performer. Many of his stories focused on the positive musical and social aspects of performing in band. He remembered a competition performance in middle school, which the group did not win. He explained that he was satisfied anyway, because the group had played as well as it could have. He recalled:

> It was an amazing experience, and knowing that we played so well… it just astounds me that I was playing at that level, or playing with people at that level,

> because in seventh grade I really didn't care about my band [studies] at that point. I just took it to add something. But when I got to eighth grade and switched to tuba, it felt natural to play it.

Dave explained that he was motivated by a combination of new musical experiences, performing with a high-quality group, and being able to have opportunities to learn more about his instrument.

When I asked him about what motivates him and others in band, Dave spoke extensively about how he is motivated to improve so that he can help others to be better too. For example, his high school has a beginning band program, which sometimes performs with the concert band at his school. Regarding his motivation, he said:

> The beginning band kids really amaze me, because when I was in sixth and seventh grade, I wasn't playing as well as they are playing now, and they've only been playing for half a semester. So, it really showed me that dedication and hard work and actually wanting to be better can make you better. I mean, it was just amazing to me. And then, when my friend switched to tuba from beginning band, it just pushed me harder to make it a little easier for him. Because if I know what I'm doing, then it makes it a little easier for him to transition to the instrument and have someone to ask questions to.

Dave has a positive outlook on band, and he sees all aspects of the band experiences as ways to help him learn more, improve his skills, and help the entire group get better. I asked him if he thought everyone viewed band in the same way. He responded:

> What really makes me angry are those people who are at the top of the section and see people that are trying to get better and just try to blow them out of the water and make it so they don't lose their top spot. For me, it's a challenge for [a classmate] to come up and try to beat me for the top spot. I'd be happy if he beat me out. I would genuinely be happy, the fact that I was below him. But, I don't see why you have to… if you are the best, then you shouldn't have to do anything amazing to keep them from beating you.

Dave feels this way because he knows what it was like to struggle on a new instrument to get better, and he likes to see people help each other out. He then told a number of stories of other students and teachers that have helped him out, and how he was able to contribute to the musical success of the entire group.

When auditioning for groups or for extra music activities at school, Dave puts a lot of pressure on himself to prepare for the auditions. He explained how he is ultimately responsible for the outcome of an audition or solo competition, so he knows that if it does not turn out like he had hoped, he just needs to work harder. He added:

> I hate to see myself at a level where I know that I can be better, like when I make mistakes, or when I do something wrong or play a wrong note. If I were to just really focus and zero-in on what I'm doing, I can get it right. When I audition for something and don't get it when I know that I was perfect for the role, I know that it's not their fault. It's mine for just not being prepared.

Dave feels the same way about baseball, but does not put as much pressure on himself in sports as he does in music, because he does not intend to go as far with sports as he does with music. He puts a lot of pressure on himself to do the best that he can,

because he wants to contribute to the group in a positive way and build a good foundation for his future career as a music teacher. He said that he does not feel the need to show off or be the star of the show, and said:

> I hate being in the center. I just like being off to the side doing my own thing… when I'm in my room, I just feel free. I can do just whatever I want. When I'm in competitions… it's just crazy.

Dave later clarified that he likes competitions, but he just likes to be in a situation where he can observe everything and "take it all in." He shared theories about how judges score, why groups perform better at certain times of day than others, and thoughts about a variety of other situations that have occurred throughout the past year. He seems to be highly engaged, both by performing in band and by thinking about band. When I asked him to think about his band experience, and to explain what experiences influenced his decision to want to study music and become a band director. He shared:

> All [my teachers] do is teach people how to play music. For me, that's like a dream because I love music. I love everything about music, and the essence of music. I just love being able to teach a sixth grader coming in how to play a sixteenth-note, or to teach a high-schooler how to do perfect vibrato, or something that can make them move forward in their lives, or teach them something about themselves that they didn't know that they could do. Because when I teach myself something, or when I feel like I've reached a goal that I've set for myself, I just feel so good and I just feel so proud of myself that I want to see other kids like that, and I like to help them towards something.

Dave is highly motivated by remembering positive performance experiences, and has been influenced by memorable mentoring experiences with teachers and peers. He seeks opportunities to improve himself, and he sees comparisons with other students as means to identify ways in which he can learn something new or a chance to help someone else learn something new. When asked about whether he is more intrinsically or extrinsically regulated in band, he said:

> Probably, [I am] at a six intrinsic, because I love music and I love the satisfaction of doing well. Getting a good grade, raising my GPA, or doing well at a competition… it makes me feel a little bit better, but it's not really what fuels me. It's like an added bonus, like a cherry on the top.

Although his estimate of a six on the intrinsic side is higher than the 3.7, which was calculated from his questionnaire, his acknowledgement of some of the extrinsic motivators seem to corroborate the slightly lower score. Overall, Dave's RAI score was the fourth-highest of all of the students who completed the questionnaire, and his responses seem consistent with his scores on the other sections of the questionnaire.

Discussion and Conclusions

During the course of the interviews, subjects described their motivation in band in terms of their past experiences and the ways in which they think about those experiences. There were some differences in how students with high and low Relative Autonomy Index (RAI) scores described their motivation in band, which will be discussed in the following section. There were also differences in how students described their music participation in and outside of the school band, and students differed in how they speculated about their future participation in band. A discussion about these issues

follows, in addition to a discussion about the similarities and themes that emerged throughout the interviews with all nine of the students.

Comparing Controlled and Autonomously Regulated Subjects

Subjects with high and low RAI scores spoke about their experiences in distinctly different ways from one another, illustrating differences in how regulation can function in autonomous or controlling ways. For example, Kip and Charlie's bands combine during the fall semester to comprise the high school marching band at School A. They are both seniors, and they both have been in marching band for the same number of years. However, Kip's views on competition contrasted with those of Charlie. Kip spoke primarily about the musical and social aspects of the experience. Although Charlie also values the social aspects of competition, he pointed to the experience of winning "grand champion" as the climax of his competitive marching band career. Charlie spoke about how great it was to know that his band was better than other bands and that his band got almost everything right during a performance. In contrast, not only does Kip feel that they could have done better in marching band performances, but he also did not even mention winning "grand champion" during high school. Additionally, he disagrees with people who feel as though music is about "getting it right," and instead describes how music is about enjoyment and self-fulfillment.

Regarding performing in front of other people, Charlie and Traci view their experiences differently. For example, Charlie spoke about how important it was for him, as a senior section leader, to be able to play well and uphold his image in the band as a great trumpet player. Traci, in contrast, spoke about how playing in front of her classmates was an opportunity for her to serve as an example of how to play a particular

piece of music. This view was paralleled in their discussion about competitions, in which Charlie viewed judges' feedback as controlling, and Traci viewed judges' comments as informational feedback that could help her improve her technique and her overall experience. Nicole, who received high RAI scores in the pilot study, also viewed feedback from judges and instructors as being primarily informational in nature.

Out-of-school experiences. Kip and Luke share common types of experiences in their out-of-school music participation, despite having different RAI scores in band. Kip demonstrates intrinsic motivation in and outside of school. Luke's comments in contrast, show that he is intrinsically motivated when playing guitar at home, but not playing in the band at school. Luke appears to view school band as a means to hang out with friends and go on trips, and he becomes more disinterested as his instructor strictly controls more about his experience. As a result, both students speak highly of their out-of-school music activities, but Luke is very critical of the school band and the experience that his teacher provides in class.

Luke described that he is motivated to play guitar at home because he has the freedom to engage in a series of decisions that requires him to think critically about new types of music that he finds, search for resources to help him understand and contextualize new music, and critically think about his learning strategies, while allowing perform music that he enjoys. This suggests that teachers could connect better with students by also trying to understand the ways that they learn outside of school.

Environmental supports. Luke and Charlie are similar in how they are regulated in the band environment, although Charlie displayed slightly higher Interest-enjoyment and Effort-importance scores than Luke. Based upon their answers in the interview,

Charlie might appear to his teacher and peers to be much more motivated than Luke, despite their similar RAI scores. The interviews demonstrated such a difference. Control and competition seem to support Charlie's ego, and although he seems to be highly motivated, he has a relatively low score for Autonomy (2.5) and a high score for Pressure (4.5). Charlie's environment provides experiences that support his desire to compete, whereas Luke interprets similar experiences as controlling, uncomfortable, and upsetting.

Describing the band experience. Overall, the subjects with high RAI scores (viz., Kip, Jill, and Traci) most-vividly described their motivation to perform and participate in band in musical terms. They pointed to specific musical moments that they remember as a standard to which they hold themselves. Traci, for example, described her motivation as striving to reach an ideal music sound, rather than something specific that anyone did to try to motivate her. Likewise, Dave described an experience in sixth grade, in which he remembers attending a concert band festival, where he saw and heard many groups that impressed and inspired him.

In contrast, the students with low RAI scores (viz., Luke, Charlie, and Nikki) spoke extensively about the external aspects of their experience. The descriptions of their experiences highlighted the potential volatility of their motivation, since their interpretation of band relies heavily on constantly changing external factors. They also spoke about how they liked music, but they saw limited personal value for band to their future. Nikki, Luke, and Cliff (although Cliff was in the middle range of RAI scores) spoke about the secondary benefits of being in band, such as looking good on a college application. Luke differed in terms of his out-of-school music participation, but held similar views as the other low RAI subjects about school band experiences. Although

Charlie was also a low RAI subject, he spoke about both intrinsic and extrinsic influences on his experience. However, like the others, he had the most vivid descriptions about many of the extra-musical elements of the band experience. He spoke about how band meant more to him than just getting into college, but for the experiences that enhanced such meaning, Charlie provided descriptions that point to external regulation.

Anticipated Future Participation: Cliff and Dave

Cliff and Dave have different long-term musical goals. Dave views band as an enjoyable activity that will help to improve his skills so he will be prepared to become a band director. In contrast, Cliff enjoys band more as his competence level increases, but still does not see band as much more than a means to help him get into college in a few years. RAI scores were also different for Dave (3.5) and Cliff (-0.2), which corresponds to findings on the questionnaire, where RAI scores were found to predict students' levels of anticipated future participation (see summary model in Figure 8.1).

Additional Themes

The interviews were manually coded in a similar manner as the coding process described in Chapter 5 for the open-ended responses in the questionnaires. Anticipated codes were used during pre-coding reads (see Creswell, 2007; Saldaña, 2009) of the transcripts, in which quotes were preliminarily chosen to highlight the relationship of factors to the students' stories. The stories that participants shared in the interviews provided insight to their motivational approaches and interpretations of their band experiences, which appeared to correspond to their responses on the motivation scales on the questionnaire.

After coding the interview responses to identify instances in which students spoke about the motivation factors, additional agreement was found with the types of responses that were given in the questionnaire about what students like, what they would change, and about their anticipated participation in music after high school. These themes seemed to correspond those that emerged within responses to the three open-ended questions at the end of the questionnaire, highlighting a point of convergence with data collected in Phase 1.

The codes were consolidated and expanded as appropriate to identify the presence of additional themes. In addition to the anticipated themes in the interviews (i.e., areas of interest examined in this study), several threads among all subjects emerged, including speaking about the types of music that they like to play, the role of competition, early feelings of success and other seminal moments, and anticipated role of music in their future careers. These themes were helpful in identifying ways in which students framed their high school band experience, which are reflected in the students' stories, but were not used in this study to develop new motivation constructs or to initiate additional areas of inquiry. Such themes could be used in future studies to explore additional aspects of motivation in the high school band context.

PART IV: CONCLUSION

CHAPTER 8: DISCUSSION, IMPLICATIONS, AND CONCLUSIONS

The aim of this study was to clarify the extent to which self-determination theory could be useful in explaining the motivation of high school band students. I was interested in why students in band classes behave differently, especially in situations where two students exhibit seemingly identical amounts of motivation. Based upon prior motivation research in other disciplines, there is a consistent body of research showing that the types of motivation, in addition to amounts, are useful for understanding how students perceive their experiences. A prime objective of the study was to use this research base to underpin how self-determination theory can provide a similar way of viewing motivation in the band context.

This study involved a sample of students from five high school band programs in a medium-sized Midwestern community. Conclusions were formulated after reviewing the literature, developing and implementing questionnaire scales from previous research, conducting interviews of students with clearly differentiated motivation profiles, and analyzing the results. Important relationships were identified among motivation factors, which helped to answer the research questions. This chapter provides a synthesis of theory, findings, and implications. It includes (a) a discussion of the findings for each of the three research questions, (b) implications for music education, (c) suggestions for future research, and (d) limitations of the study.

Discussion

This section presents a discussion of the findings as they relate to each of the three research questions stated in Chapter 1. These questions sought to determine (a) the important relationships between motivation factors, (b) motivational differences by

student characteristics and enhancement opportunities, and (c) how students describe their band experiences in terms of key aspects of self-determination theory.

Research Question 1: Relationships Among Motivation Factors

The questionnaire provided data regarding student characteristics, participation in enhancement opportunities, and perceived levels of motivation. The inter-item correlation and factor analyses provided the means to check for the reliability and validity of the scales for measuring high school band students' perceptions of their levels of motivation. Subsequent correlation analysis provided preliminary indications of important relationships between motivation factors, and these relationships guided the formulation of interview questions and areas of focus during Phase 2 of the study. Multiple regression analyses were then conducted to determine whether the data suggest that significant linear relationships exist, and the degree to which these findings could be used to explain variance in the motivation factors.

Summary model. Chapter 5 contains the results from several analyses on the motivation factors and participation variables. From those results, a summary model was constructed to visually represent the relationships between factors and other variables. Figure 8.1 presents a depiction of the linear relationships among factors and variables that were significant at the .05 level. An arrow pointing to a factor represents its function as a criterion variable, and the origins of arrows represent significant predictor variables, which were determined from the regression analyses.

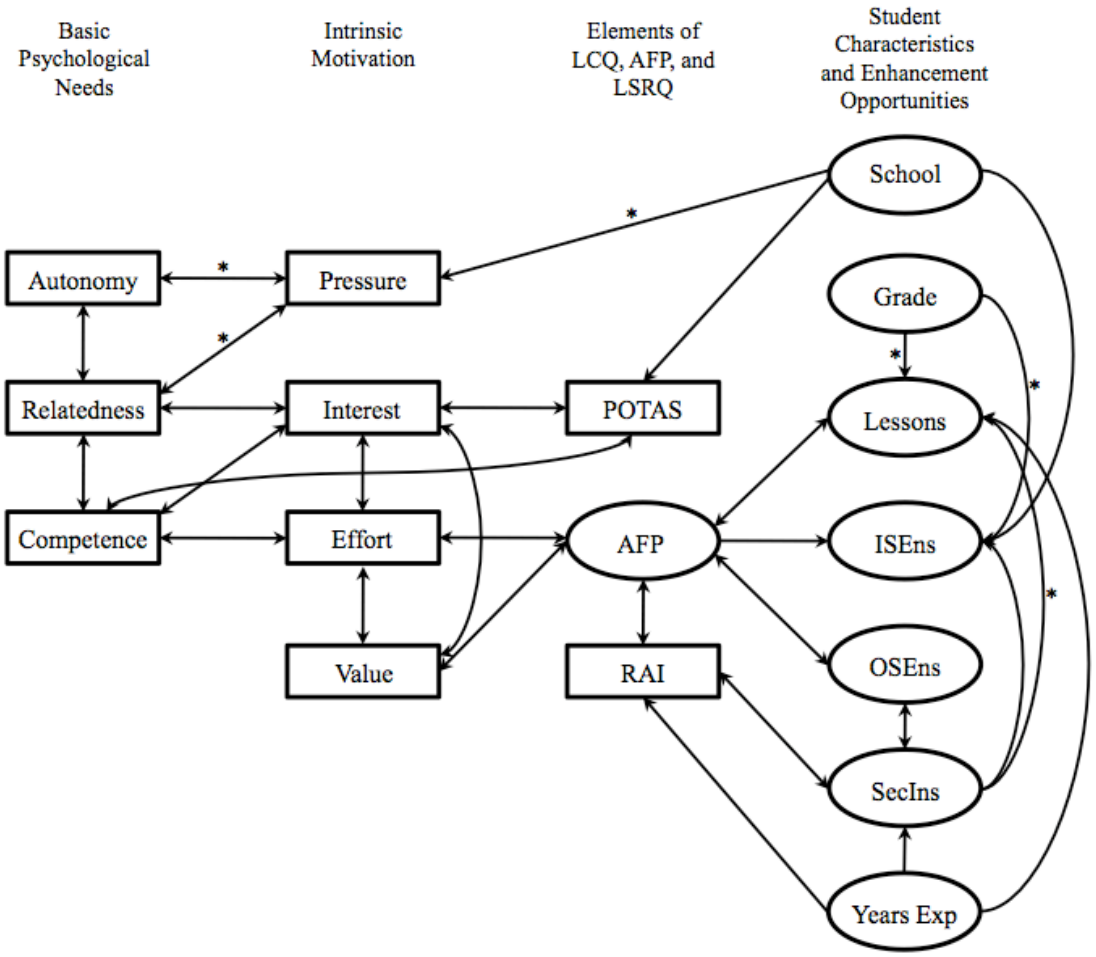

Figure 8.1. Summary model of significant linear relationships from multiple regression analyses, as reported in Chapter 5. Gender did not significantly contribute to the explanation of variance for any criterion variable in the regression analyses and was omitted from the model. Negative relationships are denoted by asterisks. Pressure = Pressure-tension, Interest = Interest-enjoyment, Effort = Effort-importance, Value = Value-Usefulness, POTAS = Perception of Teacher Autonomy Support, AFP = anticipated future participation, RAI = Relative Autonomy Index, Lessons = private lessons, ISEns = number of in-school ensembles, OSEns = number of out-of-school ensembles, SecIns = number of secondary instruments, Years Exp = number of years of experience in band.

This model provides the means to visually depict important relationships among factors and variables in this study. Such relationships include the role of (a) psychological needs satisfaction, (b) intrinsic motivation, (c) perceptions of teacher autonomy support,

(d) self-regulation, and (e) anticipated future participation in explaining the complexity of the motivation in the band context.

Psychological Needs. Support for psychological needs is believed to promote intrinsic motivation and well-being (Ryan & Deci, 2002). In prior research, psychological needs support has been shown to provide a variety of benefits, including reducing stress and anxiety, increasing intrinsic motivation, and promoting engagement (Austin & Berg, 2006; Black & Deci, 2000; Deci, Ryan, et al., 2001; Evans, 2009; Mackworth-Young, 1990; Reeve et al., 2004). Consistent with this literature, scores for perceptions of psychological needs satisfaction were found to be positively related to scores on the intrinsic motivation factors and negatively related to pressure and tension. Notable relationships between these two groups included the negative relationship between Relatedness and Autonomy to Pressure, and the positive relationship of Relatedness and Competence to Interest-enjoyment. Also, although it was expected that Autonomy perception would be able to directly predict IMI scores in the present study, such a relationship was not found.

Intrinsic motivation. Intrinsic motivation is responsible for driving people to engage in behaviors that are inherently fun, enjoyable, and valuable (Kasser, 2002). Evidence from prior research has shown positive relationships between intrinsic motivation and effort and performance (Schmidt, 2005). In this study, the intrinsic motivation factors were important in the prediction of psychological needs satisfaction. Also, Value-usefulness was found to be important in the prediction of scores on the other intrinsic motivation factors and attitudes about future participation in music. Within the

IMI, Effort-importance and Value-usefulness showed evidence of a positive relationship with Interest-enjoyment.

Perception of teacher autonomy support (POTAS). Teachers have been studied in prior research, which has found that what they say and how they act can influence their students' motivation. Specifically, support has been found for the relationships between autonomy support and competence beliefs (Black & Deci, 2000; Gaunt, 2008). Similarly, this study found evidence for the relationship between student perceptions of their teacher's autonomy support and their own sense of competence as a musician. Additionally, a significant relationship was found between perceptions of teacher autonomy support and interest and enjoyment. These results reinforce evidence that teachers can play an important role in fostering intrinsic motivation and feelings of competence in their students by providing autonomy support in their classes. For example, every time teachers encourage students to think critically, evaluate, and then make decisions, they are providing support for autonomy.

Regulation. The concept of regulation has drawn the interest of educational researchers, since it helps to explain the extent to which students engage in behaviors for internal versus external reasons (Reeve et al., 2007; Schunk et al., 2008; Schunk & Zimmerman, 2008; Zimmerman & Schunk, 1989). Prior research has shown that learners who engage in behaviors for internal reasons are more likely to persist in those activities and have higher levels of engagement (Black & Deci, 2000; Deci, 1971; Vallerand & Bissonnette, 1992; Vansteenkiste, Simons, et al., 2004). In this study, regulatory perceptions were reported by the Relative Autonomy Index (RAI). RAI demonstrated a positive relationship to anticipated future participation, indicating that higher levels of

perceived autonomous regulation could positively predict attitudes about future participation in music activities. The interviews also provided evidence that students who perceived themselves to be autonomously regulated would anticipate higher levels of engagement with music in the future.

Anticipated future participation in music (AFP). As previously discussed, engagement and persistence have been shown in other studies to be closely connected to internal regulation and autonomous function. Autonomous regulation perception in this study showed evidence of a positive relationship to anticipated future participation in music. Additionally, AFP was related to factors on the Intrinsic Motivation Inventory, private lesson participation, and out-of-school music participation. These results suggest that autonomous regulation and intrinsic motivation are important to promoting students' attitudes about the level of future engagement with music in their lives. Students who participate in lessons may see such activities as ways to prepare for their future musical endeavors. Other out-of-school ensemble participation can provide realistic examples to students of ways in which they and other people might participate in music after high school, which could influence their expectations about how music could fit into their lives.

Research Question 2: Student Characteristics and Enhancement Opportunities

As shown in the regression analyses (see Figure 8.1), student characteristics and enhancement opportunities mattered in the prediction of several motivation factors. Using the summary model, we can identify the regression equations in which each variable acted as a predictor variable. These relationships indicated how a change in score for the predictor variable could be used to predict a change in the criterion variable in each

equation; and therefore, indicate how categories of students and differing participation levels compare in terms of other variables. Key differences included those for (a) student age and experience level, (b) school, and (c) participation level.

Student age and experience level. Grade level showed a positive relationship to whether students took private lessons and the number of in-school ensembles in which they participated. The linear models indicated that older students were less likely to take private lessons than younger students. Additionally, students who took lessons were more likely to anticipate a high level of future participation in music. This may suggest that as students get older, they are less likely to engage in extra-curricular music activities, such as lessons, if they do not value them as necessary activities to prepare them for their anticipated level of music participation after high school.

The variable for years of experience is important because it does not necessarily provide the same type of information as grade level. All five schools in the main study had students with only one year of band experience (n = 13), and several offered beginning band classes. These students started band in high school, and therefore, they do not share the same length of experience as many of their peers, who started band in elementary or middle school. Years of experience showed a positive relationship in the prediction of private lesson participation and the number of secondary instruments played by students. Years of experience also demonstrated a negative relationship in the prediction of RAI scores, suggesting that students with more experience were regulated in more controlling ways than students with less experience.

School. The school variable was derived by categorizing schools in order from smallest to largest. Therefore, a positive relationship in the prediction of another variable

would indicate that as school size increased, so too would the predicted value of the other variable. School size showed a positive relationship to Pressure-tension, POTAS, and the number of in-school ensembles in which students participated. It is reasonable to expect that Pressure-tension and POTAS are related to the schools students attend, since the teacher, curricula, peer groups, and other contextual features are different for each of the five schools. Likewise, in-school music participation may differ for schools because of the number of courses offered to students or because of other factors that could impact enrollment. For example, students in smaller schools may be limited in their enrollment by taking other courses that are only offered once a day, whereas there may be duplicate courses offered in larger schools, giving students some flexibility in their schedules.

Participation levels. Private lesson participation demonstrated a significant, positive relationship in the prediction of the AFP variable. Students who took private lessons had higher attitudes about future participation in music (M = 1.94, SD = .96) than those who did not (M = 1.39, SD = .72). Also, students who played a large number of secondary instruments were likely to also report high levels of ensemble participation and autonomous regulation. Overall, participation levels showed an overall positive relationship to autonomous regulation and attitudes about engagement and persistence. Since lessons and elective ensemble experiences were optional for students in this study, these results suggest that choice could play an important role in sustaining autonomous regulation and promoting the transfer of music activities to students' post-schooling lives.

Research Question 3: How Students Describe their Band Experiences

The questionnaire and interview phases yielded data that were combined to address the question of how students describe their band experiences based upon their

motivation profiles as investigated in this study. In general, the students who scored at opposite ends of the Relative Autonomy Index described perceptions of their band experiences in contrasting ways. The Phase 2 interviews, in combination with open-ended responses from the questionnaire, contributed to the overall study by conveying such contrasts through the students' own words.

As previously reported in Chapter 7, autonomously regulated students described their band experience primarily in terms of intrinsic reasons for their participation in band, their confidence in their ability to participate at a level that they can enjoy, and positive social connections. Such descriptions suggest that these students' basic psychological needs were being met. In contrast, a key difference for control-regulated students was how prevalent extrinsic descriptors were in their stories about their band experience. Descriptions from students on both ends of the RAI spectrum also highlighted key differences in how students valued their experience, their views on competition, future participation in music, and several other issues. These differences were illustrated in the students' stories and the depictions of factor relationships in the summary model, and have potential implications for music education, which are discussed in the following section.

Implications for Music Education

A major objective of this study was to provide insight into how teachers can improve instruction by better understanding and responding to different types of student motivation in their classrooms. This section provides implications for music education that are based upon the conclusions, including the issues of (a) feedback and support, (b) social climate, (c) perceived value of music activities, and (d) variety of experiences.

Types of Feedback and Support

As previously discussed, research has shown how feedback can act in informing or controlling ways, demonstrating how supports for autonomy can decrease pressure and anxiety while increasing intrinsic motivation. This study reflects both of these relationships, and the results demonstrate that intrinsic motivation and low levels of pressure and tension are positively related to autonomy perception. Opportunities to provide autonomy support can be maximized by emphasizing the informing nature of feedback. For example, verbal praise, sticker charts, grading, and other performance reports can be informing if they focus on student progress and improvement, rather than the controlling nature of comparisons that transplant focus from the process of making music to some extra-musical focus. Additionally, teachers can explain the benefits of competition to students, including listening to their peers, performing for new audiences, and having an opportunity to get feedback that will help them improve their musical skills.

Social Climate

As Campbell et al. (2007) found in their study, social meaning plays a considerable role in shaping students' perceptions of musical experiences. In the present study, relatedness demonstrated important relationships to the perception of autonomy and competence, interest and enjoyment, and low levels of pressure and tension. Also, 43.4% of the questionnaire respondents indicated that friends, people, belonging, or other social aspects were what students enjoyed most about their band experience, and all nine of the interview respondents shared stories about the prominence and importance of social interactions with their peers. In the interviews, students also talked about the value

of team-building activities, band camp socialization, and as Luke mentioned, finding a balance between "business and fun." These results suggest that helping students achieve such a balance could be helpful in maximizing interest, enjoyment, and satisfaction of psychological needs, while decreasing amounts of pressure and tension. Teachers can draw on the social connectivity of their students to provide experiences that are musically satisfying and supportive of student motivation.

The Value of Music

The interviews in this study magnified the findings from the questionnaire, which indicated that students have a variety of ways in which they place value on music. For example, some students reported that they love listening to and performing music, while others indicated that they participated in band to help improve the appearance of their college applications or to affect other extra-musical issues. Extra-musical valuing of band was reported by students with controlling RAI scores, as demonstrated in the interviews and in the open-ended responses on the questionnaire. Additionally, RAI scores were found to be important in the prediction of anticipated future participation in music activities.

These results suggest that it is important for teachers to emphasize the benefits of music for all students, not just those who are planning music careers. From my own experience, I have observed some students who were encouraged to join or continue band for extra-musical reasons, like trips, scholarships, and other extra-musical benefits, and then their teachers were later surprised when these students did not have the same type of motivation as students who joined for other reasons. As a profession, we can help our students translate the benefits, and encourage them to invest in music for their own

enjoyment. If we want students to continue participating in music throughout their lives, we must help them experience music in ways that are personally valuable and which transfer to other musical contexts.

Variety of Experiences

A variety of enhancement opportunities and participation levels were shown in this study to be related to autonomous regulation and anticipated future participation in music. These results suggest that students' long-term music participation could benefit from having access to resources that allow them to pursue music outside of band. Teachers could promote summer music camp programs, help students arrange private lessons, encourage partnerships with local university programs, help students explore studies on additional instruments, and assist students in making connections with local community music groups. Due to location or other concerns, this may not be easy for all teachers to do. However, even providing opportunities in class for students to experience enhancement activities may help to support intrinsic motivation and attitudes about future participation. In illustration of this point, Luke described a concern in his interview about the fact that his director brought in specialists to help several other sections in the band, but not his. He mentioned that his outlook on band might be brighter if he were able to have such opportunities.

Music Teacher Education

Music teacher educators can help music education majors prepare for the motivational diversity of their students. Future teachers can prepare by (a) reflecting on their own experiences; (b) listening to what their own students say about their experiences; (c) talking to veteran teachers about these issues and their approaches to

feedback, competition, and other motivational concerns; and (d) encouraging them to carefully consider how their course content and delivery interacts with their students' motivation.

As music educators prepare to enter the profession, it is crucial that they consider the types of influences they can have on their students' motivation, both in the design of their courses and in how those courses are delivered. As demonstrated in this study, students displayed a wide range of motivation in the high school band context. Sensitivity to such diverse motivation profiles could help teachers provide classroom experiences that support their students' motivational needs, and is a topic that could be addressed during music education coursework and pre-service teaching experiences.

Limitations

This study investigated the role of self-determination theory constructs in the experiences of high school band students. As with any study, it is crucial to consider what and whom the study was about, and perhaps equally important, to define what and whom it was not about. The following sections describe some of the limitations of this study.

Method

The scope of this study was limited to students' self-reports regarding their band experiences. It did not include teachers' perspectives about student motivation in general, how they view motivation in their classrooms, or their perception of specific students' motivation profiles in their classes. Essential data were collected through questionnaires and interviews, and did not include reports of observable student behaviors, teacher communications, or the day-to-day operation of the band programs. Such methods could

be important in future studies, in which a more qualitatively-situated approach might be applied to answer a variety of other research questions.

Although the quantitative methods in this study may initially appear to be dominant due to the sequential nature of this mixed methods design (i.e., questionnaires were completed prior to the interviews; see Teddlie & Tashakkori, 2009), the interpretation of results relied heavily on a complimentarity (see Greene, 2007) of purposes for mixing methods. The research questions sought to examine motivation factor relationships, report students' stories about how they view their experiences, and to make important connections between the two. This study has demonstrated important relationships between the quantitative measures of students' motivation perceptions and their qualitative descriptions of their experiences.

Data Analysis

The data analysis procedures in this study were chosen to test the reliability of several pre-constructed questionnaires and to confirm factor structures found in previous research. Therefore, each scale was treated as an independent measure of students' motivation perceptions regarding one aspect of their profiles. Future studies may benefit from reconstructing a comprehensive questionnaire, which includes versions of items from each scale used in this study. Additional factor structures might emerge from an approach that combines all items into a single factor analysis. As shown in the factor analysis of the Learning Self-Regulation Questionnaire results in the main study, for example, different analytical approaches could help to uncover additional relationships within the data, and could guide self-determination theory research in music education in important directions.

Generalizations

The sample population of this study was limited to high school band students from five high schools in one Midwestern community in the United States. Although motivation in other areas of students' lives was mentioned in the interviews and open-ended responses on the questionnaire, it was not a focus of this study. Also, although this study demonstrates relationships between motivation factors and the perception of experiences, it does not serve as a means to generalize a profile of motivation perceptions for any group other than the population studied here.

Suggestions for Future Research

This study demonstrated the appropriateness of using self-determination theory to help explain high school band students' motivation. Questionnaire and interview data were collected, which provided the means to examine key factor relationships, to determine if students' characteristics or enhancement opportunities were related to aspects of their motivation profiles, and to better understand how those factors are experienced through the eyes of high school band students. Additional self-determination theory studies in music education could help to further expand our understanding of student motivation, which would help us to continue to improve classroom instruction. As previously outlined in the limitations section, this study leaves many opportunities for expanding, improving, and rethinking how this type of research could help achieve such a goal.

One such approach would be to conduct longitudinal studies to see how students' perceptions change over time. Since perspectives and attitudes are constructed by the sum of previous experience (see Bransford et al., 2000; Gembris & Davidson, 2002; Lewin,

1935; Skinner, 1974), it may be valuable to examine specific instances that occur over time, which help shape what students think about their participation in music activities. Evans (2009), for example, studied students in their tenth year of music study, comparing his findings to studies of the same students at points throughout their schooling. Using self-determination theory, additional long-term studies could track students' motivation perceptions and allow researchers to compare motivation profiles with levels of engagement and other attitudes about their participation over time.

A situated study of students, teachers, and the music classroom could also help to enrich our understanding of student motivation. Case study and other methods could be employed to contextualize student motivation and to report observable behaviors as related to theory. Survey and interview methods are helpful in investigating attitudes and perceptions, but are limited to the extent that they are separated from observable behavior. As previously described, this study provides the basis for expanding self-determination theory research in music education.

Conclusion

Students are unique. Although students in band have a common purpose of making music together, they differ in how they approach this goal. I found widely ranging motivation profiles in the interviews and questionnaires, which illustrated that bands do not exist as homogeneous samples, despite how motivationally similar students may appear on the surface. They bring memories of past experiences to our classrooms, shaping how they react to their environment. This was illustrated quite vividly by interview respondents who described instances in which their current experiences contrasted with their prior involvement in the school band. Students are constantly

interpreting what they see and hear, and they make judgments that affect their participation. Therefore, what teachers say and do has a considerable influence on how students respond to a variety of situations.

Keeping student diversity in mind, a one-size-fits-all approach to motivation may not be appropriate to meet the needs of all students, and could risk causing dissatisfaction, decreased engagement, and attrition. Such an approach cannot cater to all students, and we must find student-centered approaches that more appropriately consider a variety of supports for the needs of each student. In ensemble classes, we naturally concentrate on a piece of music itself, but do not always focus on building a sense of community. We can more fully understand our band communities by considering the very different motivation profiles in the ensemble, supporting our students' psychological needs, making sure that we avoid treating each student the same, and by trying to understand what might inspire individuals.

Teachers who understand the motivational diversity in their ensembles, account for those differences in how they interact with their students, and thoughtfully implement student-centered approaches, are in a much better position to build a community of learners who are musically active, socially involved, and intrinsically motivated. The results of this study show how vitally important it is for teachers to consider whether they are providing experiences that are valuable to all students, and whether we can better prepare students to be excited about a lifelong relationship with music.

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APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL

Original Approval

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Bureau of Educational Research
College of Education
38 Education Building
1310 South Sixth St.
Champaign, IL 61820

April 17, 2009

Allen Legutki
Music Education Department
213 Music Annex
MB-056

Dear Al,

On behalf of the College of Education Human Subjects Committee, I have reviewed and approved your research project entitled "Motivation and Goals of Instrumental-Band Students". This project meets the exemption criteria for federal regulation 46.101(b)1 for research involving the use of normal education procedures in an educational setting where the identity of the participant is protected.

No changes may be made to your procedures without prior Committee review and approval. You are also required to promptly notify the Committee of any problems that arise during the course of the research. Please don't hesitate to contact me with any questions.

Best regards,

Anne S. Robertson
Coordinator, College of Education Human Subjects Review Committee

Cc: Dr. Gary McPherson

Approval of Modifications

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Bureau of Educational Research
College of Education
38 Education Building
1310 South Sixth St.
Champaign, IL 61820

September 18, 2009

Allen Legutki
Music Education Department
213 Music Annex
MB-056

Dear Al,

On behalf of the College of Education Human Subjects Committee, I have reviewed and approved the modifications to your research project entitled "Motivation and Goals of Instrumental-Band Students". This project continues to meet the exemption criteria for federal regulation 46.101(b)1 for research involving the use of normal education procedures in an educational setting where the identity of the participant is protected.

No changes may be made to your procedures without prior Committee review and approval. You are also required to promptly notify the Committee of any problems that arise during the course of the research. Please don't hesitate to contact me with any questions.

Best regards,

Anne S. Robertson
Coordinator, College of Education Human Subjects Review Committee

Cc: Dr. Gary McPherson

APPENDIX B: INFORMATION LETTERS AND CONSENT FORMS

Pilot Information Letters and Forms

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Music
Professor Gary E. McPherson, PhD
1114 West Nevada Street
Urbana, IL, 61801
Email: gem@illinois.edu

Dear Student,

Hi! We are from the University of Illinois at Urbana-Champaign and would like to invite you to complete a research questionnaire that will collect information about your experiences in band. The questionnaire will ask you questions about your experiences performing in your music classes, your musical interests, and your participation in music activities outside of school. The information you and other students supply will help us to understand more clearly how students form beliefs and expectations about their musical involvement.

The questionnaire will be completed by about 1,500 other students in grades 9-12 and will take about 30 minutes to complete. You will be asked to check a response for each item that indicates how much each statement is true for you, and you will be given a chance to give short-answer responses to expand on some of your answers.

Your participation is voluntary – this means that you are free to decide whether or not you want to be part of the project and complete the questionnaire. If you want to stop doing the questionnaire or withdraw from the project, you will be free to do so. There aren't any risks from participating, other than those you would find in everyday life. Your decision to participate or not, or to stop at any time, will not affect your grades or your status at school.

All information obtained during this research will remain strictly confidential. When you return this form, you will be given instructions on how to complete the questionnaire on a secure, online website. No publication or presentation that is produced from the research will indicate any personal information that would identify you or your school.

You may also be asked to participate in a 30-minute audio-taped interview in order to expand upon some of your questionnaire responses. Interviews will take place on a separate day, approximately on month after the questionnaires are completed. In order to participate in an audio-taped interview, you must also initial the second portion of the consent form. Please initial "YES" or "NO" for all sections (questionnaire and interview sections) and return the parent consent and student assent forms as soon as possible to your music instructor, using the enclosed envelope.

We look forward to working with you. We think that our research will be enjoyable for the students who participate and will allow opportunities to reflect on your own school learning. If you or your parents have any questions about this project, please contact us using the information below. If you have any questions about your rights as a participant in the research involving human subjects, please feel free to contact the University of Illinois Bureau of Educational Research at 217-333-3023. You are welcome to call collect if you identify yourself as a research participant.

You may keep a copy of this form.

Sincerely,

Professor Gary McPherson
(Principal Investigator)
Phone: (217) 333-8381
Email: gem@illinois.edu

Allen R. Legutki
(Secondary Investigator)
Phone: (217) 246-2767
Email: legutki2@illinois.edu

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Music
Professor Gary E. McPherson, PhD
1114 West Nevada Street
Urbana, IL, 61801
Email: gem@illinois.edu

I have read and understand the contents of this form and I voluntarily agree to participate in the research project titled, *Motivation and Goals of Music Students,* which examines the environmental and personal catalysts that shape students' potentials and involvement in music.

(Print) Student Name: _____

Signature of Student: _____ Date: _____

I have read and understood the contents of this form and I voluntarily agree to participate in this project by filling out a questionnaire. I understand that the results of the study will be disseminated among music education professionals in publications and conference presentations, and that all names and place references will be changed so that my identity will remain confidential. I also understand that I may withdraw participation at any time.

Initials YES_____ Initials NO_____

I grant permission for the researchers to audiotape interviews with me and to use portions of those interviews in publications and at professional conferences. I understand that all names and place references will be changed to ensure that my identity remains confidential. I recognize that I am not required to respond to any question that I choose not to answer. I also understand that I can withdraw authorization at any time.

Initials YES_____ Initials NO_____

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Music
Professor Gary E. McPherson, PhD
1114 West Nevada Street
Urbana, IL, 61801
Email: gem@illinois.edu

Dear Parent,

We are from the School of Music at the University of Illinois at Urbana-Champaign and would like to include your child, along with his or her classmates, in a research project that will collect information about students' experiences in band. Students will be asked to complete an online questionnaire about their experiences performing in their music classes, musical interests, and participation in music activities outside of school. The information your child and other students supply will help us to understand more clearly how students form beliefs and expectations about their musical involvement.

The questionnaire will be completed by about 1,500 other students in grades 9-12 and will take about 30 minutes to complete. Students will be asked to check a response for each item that indicates how much each statement is true for them, and they will be given a chance to provide short-answer responses to expand on some of their answers. They may also be asked to participate in a 30-minute audio-taped interview in order to expand upon some key questions. Interviews will take place on a separate day, approximately one month after the questionnaires are completed. In order to participate in an audio-taped interview, you and your child must also initial the second portion of the consent and assent forms.

Your child's participation in this project is completely voluntary. Only those students who want to participate and sign the form will do so, and any student may stop taking part at any time. Every student should return the enclosed forms, whether or not they choose to participate. Please initial next to either "YES" or "NO" for all sections (questionnaire and interview sections) and return the parent consent and student assent forms as soon as possible to your child's band instructor, using the enclosed envelope. Your child will be free to withdraw his or her participation in this study at any time and for any reason without penalty. These decisions will have no affect on your future relationship with the school or your child's grades or status there.

We look forward to working with your child. We think that our research will be enjoyable for the students who participate and will help them reflect on their own school learning. If you have any questions about this project, please contact us using the information below. If you have any questions about your child's rights as a participant in the research involving human subjects, please feel free to contact the University of Illinois Bureau of Educational Research at 217-333-3023. You are welcome to call collect if you identify yourself as the parent of a research participant.

You may keep a copy of the attached form.

Sincerely,

Professor Gary McPherson
(Principal Investigator)
Phone: (217) 333-8381
Email: gem@illinois.edu

Allen R. Legutki
(Secondary Investigator)
Phone: (217) 246-2767
Email: legutki2@illinois.edu

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Music
Professor Gary E. McPherson, PhD
1114 West Nevada Street
Urbana, IL, 61801
Email: gem@illinois.edu

I do/do not (circle one) give permission for my child, _____ (name of child), to participate in the research project titled, *Motivation and Goals of Instrumental-Band Students,* which examines the environmental and personal catalysts that shape students' potentials and involvement in music.

(Print) Parent Name: _____

Signature of Parent: _____ Date: _____

I have read and understood the contents of this form and I give permission for my son/daughter to participate in this project, by completing an online questionnaire. I understand that the results of the study will be disseminated among music education professionals in publications and conference presentations, and that all names and place references will be changed so that my child's identity will remain confidential. I also understand that my child may withdraw participation at any time.

Initials YES_____ Initials NO_____

I grant permission for the researchers to audiotape interviews with my son/daughter and to use portions of those interviews in publications and at professional conferences. I understand that all names and place references will be changed to ensure that no one will be able to identify my child or my child's school. I recognize that my child is not required to respond to any question that he/she chooses not to answer. I also understand that he/she can withdraw authorization at any time by providing both researchers with written notification.

Initials YES_____ Initials NO_____

Main Study Questionnaire Letters and Forms

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Music
Professor Gary E. McPherson, PhD
1114 West Nevada Street
Urbana, IL, 61801
Email: gem@illinois.edu

Dear Student,

Hi! We are from the University of Illinois at Urbana-Champaign and would like to invite you to complete a research questionnaire that will collect information about your experiences in band. The questionnaire will ask you questions about your experiences performing in your music classes, your musical interests, and your participation in music activities outside of school. The information you and other students supply will help us to understand more clearly how students form beliefs and expectations about their musical involvement.

The questionnaire will be completed by about 500 other students in grades 9-12 and will take about 30 minutes to complete. You will be asked to check a response for each item that indicates how much each statement is true for you, and you will be given a chance to give short-answer responses to expand on some of your answers.

Your participation is voluntary – this means that you are free to decide whether or not you want to be in the project and complete the questionnaire. If you want to stop doing the questionnaire or withdraw from the project, you will be free to do so. There aren't any risks from participating, other than those you would find in everyday life. Your decision to participate or not, or to stop at any time, will not affect your grades or your status at school.

All information obtained during this research will remain strictly confidential. No publication or presentation that is produced from the research will indicate any personal information that would identify you or your school.

We look forward to working with you. We think that our research will be enjoyable for the students who participate and will allow opportunities to reflect on your own school learning. If you or your parents have any questions about this project, please contact us using the information below. If you have any questions about your rights as a participant in the research involving human subjects, please feel free to contact the University of Illinois Bureau of Educational Research at 217-333-3023. You are welcome to call collect if you identify yourself as a research participant.

You may keep a copy of this form.

Sincerely,

Professor Gary McPherson
(Principal Investigator)
Phone: (217) 333-8381
Email: gem@illinois.edu

Allen R. Legutki
(Secondary Investigator)
Phone: (217) 246-2767
Email: legutki2@illinois.edu

I have read and understood the contents of this form and I voluntarily agree to participate in this project.

(Print) Student Name: _____

Student Signature: _____ Date: _____

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Music
Professor Gary E. McPherson, PhD
1114 West Nevada Street
Urbana, IL, 61801
Email: gem@illinois.edu

Dear Parent,

We are from the School of Music at the University of Illinois at Urbana-Champaign and would like to include your child, along with his or her classmates, in a research project that will collect information about students' experiences in band. Students will be asked to complete an online questionnaire about their experiences performing in their music classes, musical interests, and participation in music activities outside of school. The information that your child and other students supply will help us to understand more clearly how students form beliefs and expectations about their musical involvement.

The questionnaire will be completed by about 500 other students in grades 9-12 and will take about 30 minutes to complete. Students will be asked to check a response for each item that indicates how much each statement is true for them, and they will be given a chance to provide short-answer responses to expand on some of their answers.

If you do not want your child to participate in the study, you can return the attached form to your child's teacher or contact us using the information below. Your child's participation in this project is completely voluntary. In addition, your child will be asked if he or she would like to complete the questionnaire. Only those students who want to participate and sign our form will do so, and any student may stop taking part at any time. Your child will be free to withdraw his or her participation in this study at any time and for any reason without penalty. These decisions will have no effect on your future relationship with the school or your child's grades or status there.

We look forward to working with your child. We think that our research will be enjoyable for the students who participate and will help them reflect on their own school learning. If you have any questions about this project, please contact us using the information below. If you have any questions about your child's rights as a participant in the research involving human subjects, please feel free to contact the University of Illinois Bureau of Educational Research at 217-333-3023. You are welcome to call collect if you identify yourself as the parent of a research participant.

You may keep a copy of this form.

Sincerely,

Professor Gary McPherson
(Principal Investigator)
Phone: (217) 333-8381
Email: gem@illinois.edu

Allen R. Legutki
(Secondary Investigator)
Phone: (217) 246-2767
Email: legutki2@illinois.edu

I DO NOT give permission for my child _____ (name of child) to participate in the research project described above.

(Print) Parent Name: _____

Parent Signature: _____ Date: _____

Main Study Interview Letters and Forms

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Music
Professor Gary E. McPherson, PhD
1114 West Nevada Street
Urbana, IL, 61801
Email: gem@illinois.edu

Dear Student,

We would like to thank you for your participation in the research questionnaire that you completed as part of our research project. We would like to invite you to participate in an extension of the project that involves answering questions about how you feel about music, what you wish to accomplish as a musician, and about your beliefs about your participation in music. The information you and about 10 other students supply will help us to understand more clearly how students like you form beliefs about their musical participation, as a result of having participated in school music programs and/or outside school activities.

If you participate in this part of the study, you will be asked to answer questions with a researcher during one interview that lasts about 40 minutes. This session would be organized at a convenient time for you and your school. With you and your parent's permission, we will audio-record your comments so that we can transcribe and code what you said after the interview.

Please note that any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. All voice recordings will be transcribed using codes so that no personally identifying information is on the tapes. We will keep audio recordings in a secure place such as a locked filing cabinet. There are expected to be no risks to participants beyond those that exist in your normal classroom activities.

You will be free to (a) discontinue in the study at any time, (b) request that the audio or video recorder be turned off at any time, and (c) request that a recorded session be destroyed and/or excluded from the study. If you have any questions during the interviews, please ask the researcher. If you have additional questions afterwards, we would be happy to answer them. You can reach us at the information below. Your decision to participate, decline, or withdraw from participation will have no effect on your future relations with, or grades at your school or the University of Illinois.

We look forward to working with you. We think that our research will be enjoyable for the students who participate and will allow opportunities to reflect on your own school learning. If you or your parents have any questions about this project, please contact us using the information below. If you have any questions about your rights as a participant in the research involving human subjects, please feel free to contact the University of Illinois Bureau of Educational Research at 217-333-3023. You are welcome to call collect if you identify yourself as a research participant.

You may keep a copy of this form.

Sincerely,

Professor Gary McPherson
(Principal Investigator)
Phone: (217) 333-8381
Email: gem@illinois.edu

Allen R. Legutki
(Secondary Investigator)
Phone: (217) 246-2767
Email: legutki2@illinois.edu

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Music
Professor Gary E. McPherson, PhD
1114 West Nevada Street
Urbana, IL, 61801
Email: gem@illinois.edu

I have read and understood the contents of this form and I voluntarily agree to participate in the research project titled, *Motivation and Goals of Instrumental-Band Students,* which examines the environmental and personal catalysts that shape students' potentials and involvement in music.

(Print) Student Name: _____

Signature of Student: _____ Date: _____

I grant permission for the investigator to audiotape my interview so my responses can be coded and analyzed at a later date.

Initials YES_____ Initials NO_____

I grant permission for the investigator to audiotape and subsequently use excerpts of audio recordings at professional conferences where the results of the study are presented. Any name or place references will be changed so that I will remain anonymous. These audio excerpts will be used to provide the audience of specialist researchers and music educators with indications of the beliefs and the level of involvement of the students who have been chosen to participate in this study.

Initials YES_____ Initials NO_____

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Music
Professor Gary E. McPherson, PhD
1114 West Nevada Street
Urbana, IL, 61801
Email: gem@illinois.edu

Dear Parent,

We would like to include your child in a research project that involves answering questions about how students feel about music, what they wish to accomplish as a musician, and about their beliefs about their participation in music. We would like to seek your assistance by allowing a member of our research team to interview your child about how he or she forms beliefs about their musical participation, as a result of having participated in school music programs and/or outside school activities. This type of research is needed in order for researchers and music educators to more fully understand the environmental and personal catalysts that shape student potential in music.

The interviews comprise a 40-minute individual session that will be arranged at a convenient time for your child and the school. The session will be audio recorded by the researcher so that the information can be coded and analyzed at a later date, and so we can use this information as a supplement when describing the results at conferences and professional meetings in music education.

Your child's participation in this project is completely voluntary. In addition to your permission, your child will also be asked if he or she would like to complete the interview. Only those students who have parental permission will do so, and any participant may stop talking at any time. These decisions will have no effect on your child's future relations with, or grades at your school or the University of Illinois.

The information that is obtained during the research project will be kept strictly confidential and will not become a part of your child's school record. Any sharing or publication of the research results will not identify any of the participants by name. There are no expected risks to participants beyond those that exist in normal classroom activities.

We think that our research will be enjoyable for the students who participate and will allow opportunities to reflect on their own school learning. If you have any questions about this project, please contact us using the information below. If you have any questions about your child's rights as a participant in the research involving human subjects, please feel free to contact the University of Illinois Bureau of Educational Research at 217-333-3023. You are welcome to call collect if you identify yourself as the parent of a research participant.

You may keep a copy of this form.

Sincerely,

Professor Gary McPherson
(Principal Investigator)
Phone: (217) 333-8381
Email: gem@illinois.edu

Allen R. Legutki
(Secondary Investigator)
Phone: (217) 246-2767
Email: legutki2@illinois.edu

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Music
Professor Gary E. McPherson, PhD
1114 West Nevada Street
Urbana, IL, 61801
Email: gem@illinois.edu

I do/do not (circle one) give permission for my child, _____ (name of child), to participate in the research project titled, *Motivation and Goals of Instrumental-Band Students,* which examines the environmental and personal catalysts that shape students' potentials and involvement in music.

(Print) Parent Name: _____

Signature of Parent: _____ Date: _____

I grant permission for the investigator to audiotape my son/daughter's interview so my son/daughter's responses can be coded and analyzed at a later date.

Initials YES_____ Initials NO_____

I grant permission for the investigator to record and subsequently use excerpts of audio recordings at professional conferences where the results of the study are presented. Any name or place references will be changed so that my son/daughter will remain anonymous. These audio excerpts will be used to provide the audience of specialist researchers and music educators with indications of the beliefs and the level of involvement of the students who have been chosen to participate in this study.

Initials YES_____ Initials NO_____

APPENDIX C: SURVEY ACCESS SHEET

ILLINOIS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SURVEY ACCESS SHEET

To access the survey, please follow the two steps below:

1. Enter the following URL into your web browser: **www.alturl.com/s5g7**

   (This is a shortened URL that will take you to the secure SurveyMonkey website for this survey)

2. Enter this password for the survey: **shsband** (not case sensitive)

If you experience any problems accessing the survey, or if you have questions regarding the survey, please contact Al Legutki at legutki2@illinois.edu or by phone at 217-246-2767.

APPENDIX D: QUESTIONNAIRES

Initial Pilot Questionnaire

1. Background Information

1. What is your first name?

2. What is your last name?

3. What is your year in school?

- ◯ Freshman
- ◯ Sophmore
- ◯ Junior
- ◯ Senior

4. What types of ensembles are you in at your school (for example - concert band, madrigal choir, jazz band, concert choir, etc.)?

5. In what types of ensembles do you participate outside of school? (mark all that apply)

- ☐ Church Choir
- ☐ Church Band/Orchestra
- ☐ Community Choir
- ☐ Community Band/Orchestra
- ☐ Community Theater
- ☐ Youth Orchestra
- ☐ Rock/Pop Band

Other (please specify)

6. What is the primary instrument that you play in band?

7. Do you play any other instruments? If so, what instruments?

8. Do you take private lessons?

- ◯ Yes
- ◯ No

9. If you take private lessons, what instruments do you study (or dance, voice, etc.)?

2. Items about your experiences in general and your experiences in band.

10. Please read each of the following items carefully, thinking about how it relates to your LIFE IN GENERAL, and then indicate how true it is for you. Use the following scale to respond:

	Not at all true			Somewhat true			Very true
I really like the people I interact with.	○	○	○	○	○	○	○
Most days I feel a sense of accomplishment from what I do.	○	○	○	○	○	○	○
I pretty much keep to myself and don't have a lot of social contacts.	○	○	○	○	○	○	○
People are generally pretty friendly towards me.	○	○	○	○	○	○	○
I feel like I can pretty much be myself in my daily situations.	○	○	○	○	○	○	○
People I interact with on a daily basis tend to take my feelings into consideration.	○	○	○	○	○	○	○
I consider the people I regularly interact with to be my friends.	○	○	○	○	○	○	○
People in my life care about me.	○	○	○	○	○	○	○
There is not much opportunity for me to decide for myself how to do things in my daily life.	○	○	○	○	○	○	○
Often, I do not feel very competent.	○	○	○	○	○	○	○
I often do not feel very capable.	○	○	○	○	○	○	○
I generally feel free to express my ideas and opinions.	○	○	○	○	○	○	○

In my life I do not get much of a chance to show how capable I am.	○	○	○	○	○	○	○
There are not many people that I am close to.	○	○	○	○	○	○	○
I feel pressured in my life.	○	○	○	○	○	○	○
I have been able to learn interesting new skills recently.	○	○	○	○	○	○	○
People I know tell me I am good at what I do.	○	○	○	○	○	○	○
The people I interact with regularly do not seem to like me much.	○	○	○	○	○	○	○
I feel like I am free to decide for myself how to live my life.	○	○	○	○	○	○	○
I get along with people I come into contact with.	○	○	○	○	○	○	○
In my daily life, I frequently have to do what I am told.	○	○	○	○	○	○	○

11. Please read each of the following items carefully, thinking about how it relates to your EXPERIENCES IN BAND, and then indicate how true it is for you. Use the following scale to respond:

	Not at all true			Somewhat true			Very true
I feel like I am free to decide for myself how to participate in band.	○	○	○	○	○	○	○
I really like the people I interact with in band.	○	○	○	○	○	○	○
Often, I do not feel very competent in band.	○	○	○	○	○	○	○
I feel pressured in band.	○	○	○	○	○	○	○
People I know tell me I am good at what I do in band.	○	○	○	○	○	○	○
I get along with people I come into contact with in band.	○	○	○	○	○	○	○
I pretty much keep to myself and don't have a lot of social contacts in band.	○	○	○	○	○	○	○
I generally feel free to express my ideas and opinions in band.	○	○	○	○	○	○	○
I consider the people I regularly interact with in band to be my friends.	○	○	○	○	○	○	○
I have been able to learn interesting new skills recently in band.	○	○	○	○	○	○	○
In band, I frequently have to do what I am told.	○	○	○	○	○	○	○
People in band care about me.	○	○	○	○	○	○	○
Most days I feel a sense of accomplishment	○	○	○	○	○	○	○

from what I do in band.							
People I interact with in band tend to take my feelings into consideration.	○	○	○	○	○	○	○
In band, I do not get much of a chance to show how capable I am.	○	○	○	○	○	○	○
There are not many people that I am close to in band.	○	○	○	○	○	○	○
I feel like I can pretty much be myself in band.	○	○	○	○	○	○	○
The people I interact with in band do not seem to like me much.	○	○	○	○	○	○	○
I often do not feel very capable in band.	○	○	○	○	○	○	○
There is not much opportunity for me to decide for myself how to do things in band.	○	○	○	○	○	○	○
People are generally pretty friendly towards me in band.	○	○	○	○	○	○	○

3. More about your experiences in band

12. Please read each of the following items carefully, thinking about how it relates to your EXPERIENCES IN BAND, and then indicate how true it is for you. Use the following scale to respond:

	Not at all true			Somewhat true			Very true
I am anxious while in band.	○	○	○	○	○	○	○
I don't put much energy into band.	○	○	○	○	○	○	○
I am very relaxed in band.	○	○	○	○	○	○	○
I think that being in band is useful.	○	○	○	○	○	○	○
I would be willing to be in band again because it has some value to me.	○	○	○	○	○	○	○
I think being in band could help me in the future.	○	○	○	○	○	○	○
It is important to me to do well in band.	○	○	○	○	○	○	○
Band is fun to do.	○	○	○	○	○	○	○
I feel pressured while in band.	○	○	○	○	○	○	○
I enjoy being in band very much.	○	○	○	○	○	○	○
I don't try very hard to do well at band.	○	○	○	○	○	○	○
I think band is important.	○	○	○	○	○	○	○
I do not feel nervous at all while in band.	○	○	○	○	○	○	○
I feel very tense while in band.	○	○	○	○	○	○	○
Band does not hold my attention at all.	○	○	○	○	○	○	○
While I am in band, I think about how much I enjoy it.	○	○	○	○	○	○	○
I think that band is quite enjoyable.	○	○	○	○	○	○	○
I think band is a boring activity.	○	○	○	○	○	○	○

I put a lot of effort into band.	○	○	○	○	○	○	○
I would describe band as very interesting.	○	○	○	○	○	○	○
I believe being in band could be beneficial to me.	○	○	○	○	○	○	○
I believe band could be of some value to me.	○	○	○	○	○	○	○
I try very hard in band.	○	○	○	○	○	○	○
I think band is an important activity.	○	○	○	○	○	○	○

4. Questions about WHY you participate in band

The following questions relate to your reasons for participating actively in your music class. Different people have different reasons for their participation in such a class, and we want to know how true each of the reasons is for you. Please use the scale to indicate how true each reason is for you.

13. I participate actively in band because:

	Not at all true			Somewhat true			Very true
Because I would feel proud of myself if I did well in the course.	○	○	○	○	○	○	○
Because I feel like it's a good way to improve my understanding of the material.	○	○	○	○	○	○	○
Because a solid understanding of music is important to my intellectual growth.	○	○	○	○	○	○	○
Because others might think badly of me if I didn't.	○	○	○	○	○	○	○

14. I am likely to follow my instructor's suggestions for studying and practicing music:

	Not at all true			Somewhat true			Very true
Because it's easier to follow his/her suggestions than come up with my own practice strategies.	○	○	○	○	○	○	○
Because he/she seems to have insight about how best to learn the material.	○	○	○	○	○	○	○
Because I would get a bad grade if I didn't do what he/she suggests.	○	○	○	○	○	○	○
Because I am worried that I am not going to perform well in the course.	○	○	○	○	○	○	○

15. The reason that I will work to expand my knowledge of music is:

	Not at all true			Somewhat true			Very true
Because I want others to see that I am good at music.	○	○	○	○	○	○	○
Because it's interesting to learn more about music.	○	○	○	○	○	○	○
Because it's a challenge to solve musical problems.	○	○	○	○	○	○	○
Because a good grade in music will look positive on my record.	○	○	○	○	○	○	○

5. Short Answer

Please provide an answer to the following questions in one or two sentences.

16. Why did you join band?

17. If you have participated in band for more than one year, why did you sign up to be a part of the group again?

18. What do you enjoy the most about band?

19. If you were to change anything about your band experience, what would you change?

20. What parts of your band experience seem EASY to you?

21. What parts of your band experience seem DIFFICULT to you?

22. How would you describe your experiences with music outside of school?

23. When you graduate from high school, what role do you think music will play in your life?

24. If another student had never been to a music competition and asked you what they were all about, what would you tell them?

25. If someone asked you to tell them what motivates you to participate in band, what would you tell them?

26. Are there other musicians in your family?

27. What does your family say about your participation in band?

28. Who has been most supportive of your participation in music?

29. What do your friends think about your participation in music?

30. Where there any questions in this survey that were confusing or unclear? If you had any difficulties taking the survey, what would you change in order to improve it?

Full Pilot Questionnaire

1. Background Information

1. First Name:

2. Last Name:

3. Gender:

- ◯ Female
- ◯ Male

4. What is your year in school?

- ◯ Freshman
- ◯ Sophmore
- ◯ Junior
- ◯ Senior

5. Counting this school year, how many years have you been in band?

- ◯ 1
- ◯ 2
- ◯ 3
- ◯ 4
- ◯ 5
- ◯ 6
- ◯ 7
- ◯ 8
- ◯ 9
- ◯ 10

6. What types of ensembles are you in at your school (for example - concert band, madrigal choir, jazz band, concert choir, etc.)?

7. In what types of ensembles do you participate outside of school? (mark all that apply)

- [ ] None
- [ ] Church Choir
- [ ] Church Band/Orchestra
- [ ] Community Choir
- [ ] Community Band/Orchestra
- [ ] Community Theater
- [ ] Youth Orchestra
- [ ] Rock/Pop Band

Other (please specify)

8. What is the primary instrument that you play in band?

9. Do you play any other instruments? If so, what instruments?

10. Do you take private lessons?

- ◯ Yes
- ◯ No

11. If you take private lessons, what instruments (or dance, voice, etc.) do you study?

2. Items about your experiences in general and your experiences in band.

12. Please read each of the following items carefully, thinking about how it relates to your EXPERIENCES IN BAND, and then indicate how true it is for you. Use the following scale to respond:

	Not at all true			Somewhat true			Very true
I feel like I am free to decide for myself how to participate in band.	○	○	○	○	○	○	○
I really like the people I interact with in band.	○	○	○	○	○	○	○
Often, I do not feel very competent in band.	○	○	○	○	○	○	○
I feel pressured in band.	○	○	○	○	○	○	○
People I know tell me I am good at what I do in band.	○	○	○	○	○	○	○
I get along with people I come into contact with in band.	○	○	○	○	○	○	○
I pretty much keep to myself and don't have a lot of social contacts in band.	○	○	○	○	○	○	○
I generally feel free to express my ideas and opinions in band.	○	○	○	○	○	○	○
I consider the people I regularly interact with in band to be my friends.	○	○	○	○	○	○	○
I have been able to learn interesting new skills recently in band.	○	○	○	○	○	○	○
In band, I frequently have to do what I am told.	○	○	○	○	○	○	○
People in band care about me.	○	○	○	○	○	○	○

Most days I feel a sense of accomplishment from what I do in band.	○	○	○	○	○	○	○
People I interact with in band tend to take my feelings into consideration.	○	○	○	○	○	○	○
In band, I do not get much of a chance to show how capable I am.	○	○	○	○	○	○	○
There are not many people that I am close to in band.	○	○	○	○	○	○	○
I feel like I can pretty much be myself in band.	○	○	○	○	○	○	○
The people I interact with in band do not seem to like me much.	○	○	○	○	○	○	○
I often do not feel very capable in band.	○	○	○	○	○	○	○
There is not much opportunity for me to decide for myself how to do things in band.	○	○	○	○	○	○	○
People are generally pretty friendly towards me in band.	○	○	○	○	○	○	○

3. More about your experiences in band

13. Please read each of the following items carefully, thinking about how it relates to your EXPERIENCES IN BAND, and then indicate how true it is for you. Use the following scale to respond:

	Not at all true			Somewhat true			Very true
I think band is important.	○	○	○	○	○	○	○
I feel pressured while in band.	○	○	○	○	○	○	○
I think that being in band is useful.	○	○	○	○	○	○	○
Band is fun to do.	○	○	○	○	○	○	○
I put a lot of effort into band.	○	○	○	○	○	○	○
I feel very tense while in band.	○	○	○	○	○	○	○
I don't put much energy into band.	○	○	○	○	○	○	○
I try very hard in band.	○	○	○	○	○	○	○
I believe band could be of some value to me.	○	○	○	○	○	○	○
I think band is a boring activity.	○	○	○	○	○	○	○
While I am in band, I think about how much I enjoy it.	○	○	○	○	○	○	○
I think that band is quite enjoyable.	○	○	○	○	○	○	○
I would describe band as very interesting.	○	○	○	○	○	○	○
Band does not hold my attention at all.	○	○	○	○	○	○	○
I do not feel nervous at all while in band.	○	○	○	○	○	○	○
It is important to me to do well in band.	○	○	○	○	○	○	○
I don't try very hard to do well at band.	○	○	○	○	○	○	○
I am very relaxed in band.	○	○	○	○	○	○	○
I believe being in	○	○	○	○	○	○	○

band could be beneficial to me.							
I think band is an important activity.	○	○	○	○	○	○	○
I would be willing to be in band again because it has some value to me.	○	○	○	○	○	○	○
I think being in band could help me in the future.	○	○	○	○	○	○	○
I am anxious while in band.	○	○	○	○	○	○	○
I enjoy being in band very much.	○	○	○	○	○	○	○

4. Questions about WHY you participate in band

The following questions relate to your reasons for participating actively in your band class. Different people have different reasons for their participation in such a class, and we want to know how true each of the reasons is for you. Please use the scale to indicate how true each reason is for you.

14. I participate actively in band because:

	Not at all true			Somewhat true			Very true
Because others might think badly of me if I didn't.	○	○	○	○	○	○	○
Because a solid understanding of music is important to my intellectual growth.	○	○	○	○	○	○	○
Because I feel like it's a good way to improve my understanding of the material.	○	○	○	○	○	○	○
Because I would feel proud of myself if I did well in the course.	○	○	○	○	○	○	○

15. I am likely to follow my band instructor's suggestions for practicing and rehearsing in band:

	Not at all true			Somewhat true			Very true
Because it's easier to follow my instructor's suggestions than come up with my own practice strategies.	○	○	○	○	○	○	○
Because I would get a bad grade if I didn't do what my instructor suggests.	○	○	○	○	○	○	○
Because my instructor seems to have insight about how best to learn the material.	○	○	○	○	○	○	○
Because I am worried that I am not going to perform well in the course.	○	○	○	○	○	○	○

16. The reason that I will work to expand my knowledge in band is:

	Not at all true			Somewhat true			Very true
Because it's interesting to learn more in band.	○	○	○	○	○	○	○
Because it's a challenge to solve band-related musical problems.	○	○	○	○	○	○	○
Because a good grade in band will look positive on my record.	○	○	○	○	○	○	○
Because I want others to see that I am good at band.	○	○	○	○	○	○	○

5. Communication in Class

17. This section contains items that are related to your experience with your band director. Teachers have different styles in interacting with students, and we would like to know more about how you have felt about your encounters with your band director. Your responses are confidential. Please be honest and candid.

	Not at all true			Somewhat true			Very true
I feel that my teacher provides me choices and options.	○	○	○	○	○	○	○
I feel understood by my teacher.	○	○	○	○	○	○	○
I am able to be open with my teacher during class.	○	○	○	○	○	○	○
My teacher conveyed confidence in my ability to do well in band.	○	○	○	○	○	○	○
I feel that my teacher accepts me.	○	○	○	○	○	○	○
My teacher makes sure I really understand the goals of band and what I need to do.	○	○	○	○	○	○	○
My teacher encourages me to ask questions.	○	○	○	○	○	○	○
I feel a lot of trust in my teacher.	○	○	○	○	○	○	○
My teacher answers my questions fully and carefully.	○	○	○	○	○	○	○
My teacher listens to how I would like to do things.	○	○	○	○	○	○	○
My teacher handles people's emotions very well.	○	○	○	○	○	○	○
I feel that my teacher cares about me as a person.	○	○	○	○	○	○	○
I don't feel very good about the way my teacher talks to	○	○	○	○	○	○	○

me.							
My teacher tries to understand how I see things before suggesting a new way to do things.	○	○	○	○	○	○	○
I feel able to share my feelings with my teacher.	○	○	○	○	○	○	○

6. Short Answer

Please answer to the following questions in two or three sentences.

18. What do you remember about your first experiences with music?

19. Why did you join band?

20. If you have participated in band for more than one year, why did you sign up to be a part of the group again?

21. What do you enjoy most about band?

22. If you were to change anything about your band experience, what would you change?

23. What parts of your band experience seem EASY to you?

24. What parts of your band experience seem DIFFICULT to you?

25. How would you describe your experiences with music outside of school?

26. When you graduate from high school, what role do you think music will play in your life?

27. If another student had never been to a music competition and asked you what they were all about, what would you tell them?

28. If someone asked you to tell them what motivates you to participate in band, what would you tell them?

29. Are there other musicians in your family?

30. What does your family say about band?

31. What do your friends say about band?

32. Who has been most supportive of your participation in band?

33. Were there any questions in this survey that were confusing or unclear? If you had any difficulties taking the survey, what would you change in order to improve it?

Main Study Questionnaire

HIGH SCHOOL BAND SURVEY

Please circle your responses or fill in the blanks when appropriate below:

1. Gender: Male Female

2. What is your year in school? 9 10 11 12

3. Counting this school year, how many years have you been in band (since beginning band)? _____

4. What types of ensembles are you in at your school (for example – concert band, marching band, choir, etc.)?

   _____

   _____

5. In what types of ensembles do you participate outside of school? (Circle all that apply)

   Community band/orchestra/choir — Youth band/orchestra/choir

   Church band/orchestra/choir — Rock/pop band

   Community theater — Other_____ (please specify)

6. What is your primary instrument in band? _____

7. Do you take private lessons? Yes No

   If so, what instruments (or dance, voice, etc.) do you study? _____

   _____

8. Do you play any other instruments? Yes No

   If so, what instruments? _____

Please read each of the following items carefully, thinking about how it relates to your experiences in band, and then indicate how true it is for you. Please use the following scale to respond to each item:

	Not at all true			Somewhat true			Very true
I feel like I am free to decide for myself how to participate in band.	☐	☐	☐	☐	☐	☐	☐
I really like the people I interact with in band.	☐	☐	☐	☐	☐	☐	☐
People I know tell me I am good at what I do in band.	☐	☐	☐	☐	☐	☐	☐
I get along with people I come into contact with in band.	☐	☐	☐	☐	☐	☐	☐
I pretty much keep to myself and don't have a lot of social contacts in band	☐	☐	☐	☐	☐	☐	☐
I generally feel free to express my ideas and opinions in band.	☐	☐	☐	☐	☐	☐	☐
I consider the people I regularly interact with in band to be my friends.	☐	☐	☐	☐	☐	☐	☐
I have been able to learn interesting new skills recently in band.	☐	☐	☐	☐	☐	☐	☐
In band, I frequently have to do what I am told.	☐	☐	☐	☐	☐	☐	☐
People in band care about me.	☐	☐	☐	☐	☐	☐	☐
Most days I feel a sense of accomplishment from what I do in band	☐	☐	☐	☐	☐	☐	☐
People I interact with in band tend to take my feelings into consideration.	☐	☐	☐	☐	☐	☐	☐
In band, I do not get much of a chance to show how capable I am.	☐	☐	☐	☐	☐	☐	☐

	Not at all true			Somewhat true			Very true
There are not many people that I am close to in band.	☐	☐	☐	☐	☐	☐	☐
I feel like I can pretty much be myself in band.	☐	☐	☐	☐	☐	☐	☐
The people I interact with in band do not seem to like me very much.	☐	☐	☐	☐	☐	☐	☐
I often do not feel very capable in band.	☐	☐	☐	☐	☐	☐	☐
There is not much opportunity for me to decide for myself how to do things in band.	☐	☐	☐	☐	☐	☐	☐
People are generally pretty friendly towards me in band.	☐	☐	☐	☐	☐	☐	☐
Band is fun to do.	☐	☐	☐	☐	☐	☐	☐
I don't put much energy into band.	☐	☐	☐	☐	☐	☐	☐
I think band is important.	☐	☐	☐	☐	☐	☐	☐
I think being in band could help me in the future.	☐	☐	☐	☐	☐	☐	☐
I don't try very hard to do well at band.	☐	☐	☐	☐	☐	☐	☐
I feel pressured while in band.	☐	☐	☐	☐	☐	☐	☐
Band does not hold my attention at all.	☐	☐	☐	☐	☐	☐	☐
I think band is an important activity.	☐	☐	☐	☐	☐	☐	☐

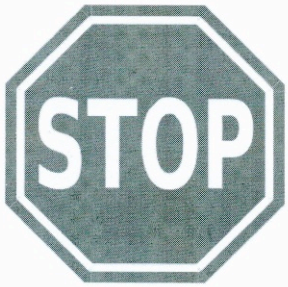
	Not at all true			Somewhat true			Very true
I believe band could be of some value to me.	☐	☐	☐	☐	☐	☐	☐
I try very hard in band.	☐	☐	☐	☐	☐	☐	☐
I would be willing to be in band again because it has some value to me.	☐	☐	☐	☐	☐	☐	☐
I do not feel nervous in band.	☐	☐	☐	☐	☐	☐	☐
I think band is a boring activity.	☐	☐	☐	☐	☐	☐	☐
It is important for me to do well in band.	☐	☐	☐	☐	☐	☐	☐
I believe being in band could be beneficial to me.	☐	☐	☐	☐	☐	☐	☐
While I am in band, I think about how much I enjoy it.	☐	☐	☐	☐	☐	☐	☐
I am very relaxed in band.	☐	☐	☐	☐	☐	☐	☐
I put a lot of effort into band.	☐	☐	☐	☐	☐	☐	☐
I enjoy being in band very much.	☐	☐	☐	☐	☐	☐	☐
I feel very tense while in band.	☐	☐	☐	☐	☐	☐	☐
I think that being in band is useful.	☐	☐	☐	☐	☐	☐	☐
I think that band is quite enjoyable.	☐	☐	☐	☐	☐	☐	☐
I am anxious while in band.	☐	☐	☐	☐	☐	☐	☐
I would describe band as very interesting.	☐	☐	☐	☐	☐	☐	☐

The following questions relate to your reasons for participating actively in your band class. Different people have different reasons for their participation in such a class, and we want to know how true each of the reasons is for you. Please use the scale to indicate how true each reason is for you.

	Not at all true			Somewhat true			Very true
I participate actively in band because:							
A solid understanding of music is important to my intellectual growth.	☐	☐	☐	☐	☐	☐	☐
I feel like it's a good way to improve my understanding of the material.	☐	☐	☐	☐	☐	☐	☐
Getting a good grade in band is important to me.	☐	☐	☐	☐	☐	☐	☐
I would feel good about being able to perform well on my instrument.	☐	☐	☐	☐	☐	☐	☐
I am likely to follow my band instructor's suggestions for practicing and rehearsing in band because:							
I would get a bad grade if I didn't do what my instructor suggests.	☐	☐	☐	☐	☐	☐	☐
My instructor seems to have insight about how to best learn the material.	☐	☐	☐	☐	☐	☐	☐
Getting a good grade in band is important to me.	☐	☐	☐	☐	☐	☐	☐
It's easier to follow my instructor's suggestions than to come up with my own practice strategies.	☐	☐	☐	☐	☐	☐	☐
The reason that I will work to expand my knowledge in band is because:							
It's interesting to learn more in band.	☐	☐	☐	☐	☐	☐	☐
It's a challenge to solve band-related music problems.	☐	☐	☐	☐	☐	☐	☐
A good grade in band will look positive on my record.	☐	☐	☐	☐	☐	☐	☐
I want others to see that I am good at band.	☐	☐	☐	☐	☐	☐	☐

This section contains items that are related to your experience with your band director(s). Teachers have different styles in interacting with students, and we would like to know more about how you have felt about your encounters with your band director. Your responses are confidential. Please be honest and candid.

	Not at all true			Somewhat true			Very true
I feel that my teacher provides me choices and options.	☐	☐	☐	☐	☐	☐	☐
I feel understood by my teacher.	☐	☐	☐	☐	☐	☐	☐
I am able to be open with my teacher during class.	☐	☐	☐	☐	☐	☐	☐
My teacher conveys confidence in my ability to do well in band.	☐	☐	☐	☐	☐	☐	☐
I feel that my teacher accepts me.	☐	☐	☐	☐	☐	☐	☐
My teacher makes sure I really understand the goals of band and what I need to do.	☐	☐	☐	☐	☐	☐	☐
My teacher encourages me to ask questions.	☐	☐	☐	☐	☐	☐	☐
I feel a lot of trust in my teacher.	☐	☐	☐	☐	☐	☐	☐
My teacher answers my questions fully and openly.	☐	☐	☐	☐	☐	☐	☐
My teacher listens to how I would like to do things.	☐	☐	☐	☐	☐	☐	☐
My teacher handles people's emotions very well.	☐	☐	☐	☐	☐	☐	☐
I feel that my teacher cares about me as a person.	☐	☐	☐	☐	☐	☐	☐
I feel good about the way my teacher talks to me.	☐	☐	☐	☐	☐	☐	☐
My teacher tries to understand how I see things before suggesting a new way to do things.	☐	☐	☐	☐	☐	☐	☐
I feel able to share my feelings with my teacher.	☐	☐	☐	☐	☐	☐	☐



SHORT ANSWER: If you have time at the end of the survey period and would like to provide additional information about your band experience, please answer the following questions.

What do you enjoy most about band?

If you were to change anything about your band experience, what would you change?

When you graduate from high school, what role do you think music will play in your life?

APPENDIX E: INTERVIEW GUIDE

Phase 2 Interview Guide

Experience and General Motivation

1. How would you describe your music experiences at school?
2. How did you first get involved in band, and what kinds of classes do you take at your school?
3. What kinds of music do you play in band?
4. How do you feel you fit in with other people in class?
    a. Do your peers accept and encourage you in band?
    b. Do your parents encourage you to be in band?
    c. What are your interactions like with your teacher?
5. What really motivates you in band?
6. Is there anything that makes you less motivated?
7. What are your band director's strengths as a teacher?
8. Is there anything stressful about being in band?
9. Do you participate in music competition? What is a typical competition like?
10. What role will music play in your life after high school?
11. How would you describe your music experiences outside of school?
12. Do you have a lot of choice in band?
13. How much effort do you think you put into band?
14. How is band useful to you?
15. How competent do you feel you are in band?
16. Do you have a lot of friends in band?
17. What advice would you give to a beginning band student about how to get the most out of their band experience?

Intrinsic and Extrinsic Motivation
Provide explanation:

> *Motivation can be explained as being intrinsic and extrinsic. The more intrinsic our motivation, the more we do things because internal concerns influence our actions. The more extrinsic our motivation, the more we do things because external concerns influence our actions.*

1. When you think of all of the things you do in band, where you think you fall on the spectrum from intrinsic to extrinsic motivation?
2. If you could pick one place with a seven being completely intrinsic on one side, a seven on the other side being completely extrinsic, and a zero being an equal mix of the two, where would you fall?
3. Why did you pick that spot?
4. In what ways do you feel you demonstrate that type of motivation?
5. Are there times that you feel differently about your motivation?