Liberty University School of Music

Recommendations for Improving the Recruitment of High School Orchestra Students Using Basic Psychological Needs Theory

A Thesis Submitted to
the Faculty of the School of Music
in Candidacy for the Degree of
Doctor of Music Education

by

Ryan Michael Silvestri

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An Applied Research Study Presented in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Music Education

Liberty University

2024

Approved by

Dr. Brian Stiffler, Ed. D., Faculty Chair

Dr. Hanna Byrd, D.W.S., Committee Member

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Abstract

Student recruitment and retention are paramount for music educators at the secondary level, where enrollment is often non-compulsory. It is difficult for directors to build and maintain successful programs without sufficient retention from middle to high school. Low enrollment can lead to the elimination of string teacher positions and put programs at risk. The academic and social demands on students today are great, and music educators must find creative ways to make their classes appealing to students while maintaining the rigor required for musical excellence. In recent years, researchers have used basic psychological needs theory, a subset of Self-Determination Theory, to examine the motivation of music students to continue enrollment in music classes. The research shows that students in a program that meets their psychological needs for autonomy, relatedness, and competence are more likely to remain enrolled year after year. However, few studies examine whether recruiting methods appeal to the satisfaction of these basic psychological needs. The primary research question addressed in this study is: how can orchestra directors improve their recruitment of high school orchestra students? This applied research study gathered data to answer this question using semi-structured interviews analyzed with qualitative coding, an online survey using quantitative, Likert-type questions, and the collection of recruiting documents for qualitative analysis. The study provides recommendations for improving recruiting methods based on appealing to students' psychological needs.

Keywords: recruiting, psychological needs, competence, relatedness, autonomy

Acknowledgments

Obtaining a doctoral degree has been a dream of mine for many years, and the completion of this degree and thesis would not have been possible without the support and encouragement of my professors, family, and friends. First, I would like to thank my wife, Stephanie, for her unwavering support and belief in me throughout this process. Her offering a simple "I'm proud of you, Ryan" as I completed each assignment, paper, and class meant more than I can put into words. I am eternally grateful to my children, Rocco, Rosemarie, Rita, and Raphael, for cheering me on as I worked to become "Doctor Daddy." I want to thank my parents, Ray and Sally, for the countless ways they have supported my musical endeavors from the beginning. From buying my first violin, driving me to lessons each week, to attending my concerts at Wando today, I am forever indebted to them for their love and encouragement.

I am grateful to Liberty University for making this degree in music education available. All the professors were excellent, but I want to thank Dr. Brian Stiffler and Dr. Hanna Byrd, my thesis advisor and reader, for their guidance. I am confident that working through the Doctor of Music Education program has helped me to become a better musician, educator, and researcher. I am proud to have been a doctoral student at such a supportive, Christ-centered university.

Lastly, I would like to thank God for his enduring love and for spiritually, physically, and mentally sustaining me throughout this degree. Working on a doctoral degree with four young children and a full-time teaching and performing career has been a challenge, and I know it would not have been possible without His faithfulness and blessings.

Role of the Researcher

Ryan Silvestri is a high school orchestra teacher and professional violinist living in South Carolina. Ryan holds a bachelor's degree in music education from Florida State University, where he studied with Dr. Michael Allen. He served as a graduate assistant at the University of North Carolina at Greensboro, earning a master's degree in violin performance. Ryan has performed as a violinist with the Charleston, Greensboro, and Tallahassee Symphonies. His primary violin teachers include Marjorie Bagley, Corinne Stillwell, Eliot Chapo, John Wilcox, and Kathryn Walker. Ryan began teaching in 2012 at Wando High School in Mount Pleasant, South Carolina. During his tenure at Wando, he has grown the orchestra from two classes and fifty students to four classes and over one hundred and fifty students. His groups have consistently earned top ratings at state and regional adjudications, and the Wando Honors Orchestra received invitations to perform at the SCMEA state conference in 2017 and 2024. As a high school director, Ryan is acutely aware of the need for effective recruiting methods for rising high school students. The successes and failures of his recruiting efforts throughout his career can serve as biases for this study.

Permission to Conduct Research

The researcher developed his topic and received approval from his Liberty University advisors to proceed with the study on September 18, 2023 (see Appendix A). Following approval of his research proposal, the researcher obtained permission from the Liberty University Institutional Review Board (IRB) before collecting data for this study (see Appendix B). For the anonymous survey, a post on the private Facebook Group "School Orchestra and String Teachers" was approved by one of the page moderators, Dr. Gail Barnes (see Appendix C). The researcher used publicly available emails from participants' schools to recruit them for the semistructured interviews and qualitative document analysis. The Liberty University IRB website states, "A study site is **not engaged** [emphasis added] in a research study, and documentation of permission does not need to be submitted to the IRB if the site's only involvement will be as follows: Provide potential participants' email addresses to a researcher for recruitment purposes" As such, the researcher was not required to seek approval from each participant's school or district before contacting participants for this portion of the study. The researcher provided an information sheet to participants of all three data collection methods for this study containing additional information about the research and who to contact with any questions.

Ethical Considerations

Applied research aims to "influence the beliefs and behaviors of gatekeepers, stakeholders, and/or participants to solve a problem." As a result, researchers must be cautious in their data collection and use to ensure the ethical treatment of all participants. For this applied research study, the researcher solicited survey participants using Facebook posts and direct emails with wording approved by the Liberty University IRB (see Appendices D and E). The researcher obtained email addresses for potential survey participants through publicly accessible school and orchestra program websites. Participants for the interviews and document collection were solicited via email (see Appendix F) using email addresses obtained from publicly accessible websites. All participants were teachers who taught at least one elective high school orchestra class. Participants in all three data collection methods were free to discontinue participation at any time.

It is essential for researchers to "respect the privacy and anonymity of participants" to ensure that data is never "reported in a manner that could link the participant to the information." The survey responses were completely anonymous and did not include the collection of participant names, email addresses, IP addresses, or places of employment. For data from interviews and document analysis that the researched utilized in the study, participant names, geographic locations, and places of employment were either replaced with pseudonyms or redacted. The researcher stored files containing data from all three collection methods on his password-locked computer, which was stored in his home office and secured by a centrally

¹ Bunnie L. Claxton and Kurt Y. Michael, *A Step-by-Step Guide to Conducting Applied Research, Third Edition* (Dubuque, Iowa: Kendall Hunt Publishing Company, 2023), 22.

² Ibid.

³ Ibid.

monitored alarm system. Per the IRB requirements, the researcher agreed to destroy all data collected for this study after three years.

Chapter One: Introduction

Overview

This chapter lays the foundation for examining the relationship between recruiting high school orchestra students and satisfying their basic psychological needs for competence, relatedness, and autonomy. When music classes become non-compulsory, the need to better understand why students choose to continue studying, particularly during significant transitions such as from middle to high school, is paramount. Secondary teachers will struggle to build successful programs if they are unsuccessful at recruiting new students.

Despite much research on student retention and attrition, there is little consensus on why students continue or cease enrollment in school programs.⁴ However, researchers have recently examined this subject using Self-Determination Theory (SDT) and one of its subsets, basic psychological needs theory (BPNT). The results indicate that meeting students' psychological needs for competence, relatedness, and autonomy can positively impact their decisions to study music.⁵ Studying how high school orchestra teachers' recruiting methods appeal to the psychological needs satisfaction of potential students can provide educators with the knowledge to strengthen and streamline their recruiting frameworks. This chapter presents the background of the topic, organizational profile, theoretical background, introduction to the problem, significance of the research, purpose statement, central research question, definitions, and summary.

⁴ Phillip M. Hash, "Student Retention in School Bands and Orchestras: A Literature Review," *Update: Applications of Research in Music Education* 40, no. 3, (2022): 12, https://doi.org/10.1177/87551233211042585.

⁵ Elisabeth Freer and Paul Evans, "Choosing to Study Music in High School: Teacher Support, Psychological Needs Satisfaction, and Elective Music Intentions," *Psychology of Music* 47, no. 6 (2019): 791, https://doi.org/10.1177/0305735619864634.

Background of Topic

Embedded in every aspect of a high school orchestra teacher's job is the need for effective recruiting, retention, and development of a well-rounded program. Though striving for ensembles that perform at a high level and have support from the local community is necessary, one can argue that no task is more essential than recruiting new students. Page Mitchum writes in her study on student motivation to participate in school music ensembles, "No matter how visible or successful an ensemble is, *students must be involved* [emphasis added] to maintain a strong program." An educator may have excellent pedagogical knowledge and performance abilities, but these skills are of little value without students to teach.

Veteran string educator Christopher Selby emphasizes that "Orchestra teachers need to be able to articulate *why* [emphasis added] string education is important," noting that with the plethora of course options that students can choose today, string teachers must persuasively communicate how students will benefit from enrolling in their classes. While it is the job of an orchestra teacher to address any concerns or challenges, such as scheduling, that may impede a child from joining the orchestra, current research suggests, "The best practice may be a consistent emphasis on how learning activities support psychological needs." Showing students how being a part of the orchestra can help them grow as musicians, develop strong social networks with their peers and instructors, and allow their voices to influence decision-making for themselves and others can lead to a robust, student-centered orchestra program.

⁶ Page Posladek Mitchum, "Student Motivation to Participate in Instrumental Music" (Masters Thesis, University of Missouri-Kansas City, 2008), 16, ProQuest Dissertations & Theses Global.

⁷ Christopher Selby, *Habits of a Successful Orchestra Director* (Chicago: GIA Publications, 2021), 11-13, ProQuest Ebook Central.

⁸ Elisabeth Freer and Paul Evans, "Choosing to Study Music in High School: Teacher Support, Psychological Needs Satisfaction, and Elective Music Intentions," *Psychology of Music* 47, no. 6 (2019): 795, https://doi.org/10.1177/0305735619864634.

Effective recruitment is a process that is ongoing throughout the school year and is critical to ensuring job security and the health of an orchestra program. Especially when music classes are electives, as they often are at the high school level, maintaining high enrollment numbers can help protect programs and teaching positions from cuts when budget and staffing concerns arise. Identifying how orchestra teachers' recruiting methods appeal to students' psychological needs and whether those that do have a more significant impact on decisions to enroll in high school has immense potential to aid string teachers. Not only can such research help them modify their recruiting methods for greater effectiveness, but it can also assist them in streamlining the process to allow more time for the other demands of their jobs. Throughout this study, "recruiting methods" refer to strategies a classroom music teacher uses to encourage initial student enrollment in their program.

Organizational Profile

In their manual on the subject, Bunnie Claxton and Kurt Michael write that applied research is "site-specific, meaning that the research is conducted for a specific school, school system, school district, or other defined site, entity, or *activity* [emphasis added]." The site for this study is the activity of recruiting high school orchestra students. Claxton and Michael note that the site-specific nature of applied research can prevent it from being applied more broadly. For this study, however, the author chose an activity as the site instead of one specific school or district, hoping to increase the likelihood that teachers in various educational settings could utilize the findings. The interviews, survey, and document analysis gathered data from public and

⁹ Bunnie L. Claxton and Kurt Y. Michael, *A Step-by-Step Guide to Conducting Applied Research, Third Edition* (Dubuque, Iowa: Kendall Hunt Publishing Company, 2023), 2.

¹⁰ Ibid.

private school teachers from multiple geographic locations and socioeconomic levels. No matter the type of school, the demographic makeup of its students, or the socioeconomic level of the community, orchestra teachers in all situations who teach elective classes must have the skills and knowledge to recruit for their programs effectively.

Theoretical Background

Research on motivation in music education varies widely, and there is no unified vision or approach. This lack of clarity can add to the challenge of examining recruiting methods and their effectiveness in encouraging students to continue music study. Understanding what motivates students is critical, though, as it can shed light on how they navigate through times of struggle to either excel to higher levels or decide to discontinue formal music study. In recent years, many music education researchers have turned to Self-Determination Theory, pioneered by Edward L. Deci and Richard M. Ryan, as the framework for studying student motivation.

According to Deci and Ryan, Self-Determination Theory (SDT) proposes that "Humans are active, growth-oriented organisms who are naturally inclined toward integration of their psychic elements into a unified sense of self and integration of themselves into larger social structures." In other words, individuals will seek experiences and situations where they can grow, develop a sense of who they are, and find their place in society.

Deci and Ryan, in their development of SDT, sought an approach that focused less on external influences and attempts to control behavior and more on the internal processes that drive

¹¹ Paul Evans, "Self-determination theory: An approach to motivation in music education," *Musicae Scientiae* 19 (2015): 65, https://doi.org/10.1177/1029864914568044.

¹² Ibid.

¹³ Edward L. Deci and Richard M. Ryan, "The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior," *Psychological Inquiry* 11 (2000): 229, https://doi.org/10.1207/S15327965PLI1104_01.

human motivation. ¹⁴ A central focus of the theory is how social environments "support or thwart" motivation. ¹⁵ One of the primary factors that influenced the adoption of SDT for this study was the desire to understand the factors that could support and suppress student motivation. While music educators must understand why students choose to take their classes, identifying those factors that negatively influence their desire to study music can be just as, if not more, enlightening as they work to craft a classroom and program culture that serves students musically and socially. Furthermore, with its complex student-teacher relationships, peer relationships, and communal efforts to convey musical ideas at a high level, the orchestra classroom is the epitome of a "social structure."

The branch of SDT known as basic psychological needs theory (BPNT) further examines how the satisfaction or frustration of a person's psychological needs for competence, relatedness, and autonomy impact motivation. According to BPNT, "In order to survive and thrive, individuals have psychological needs that must be satisfied, just as individuals have physiological needs such as food and water." Satisfaction of psychological needs is not simply about success or failure but about mental health, as studies argue that there can be detrimental psychological effects on an individual if their needs are unmet. While many factors may influence students' elective choices as they begin high school, choosing a framework focused on

¹⁴ Richard M. Ryan and Edward L. Deci, *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness* (New York: Guilford Press, 2017), vii, https://doi.org/10.1521/978.14625/28806.

¹⁵ Ibid., 3.

¹⁶ Paul Anthony Evans, "Psychological Needs and Social-Cognitive Influences on Participation in Music Activities" (PhD. Diss., University of Illinois at Urbana-Champaign, 2009), 21, ProQuest Dissertations & Theses Global.

¹⁷ Edward L. Deci and Richard M. Ryan, "The Importance of Universal Psychological Needs for Understanding Motivation in the Workplace," in *The Oxford Handbook of Work Engagement, Motivation, and Self-Determination Theory*, ed. Marylène Gagné (Oxford: Oxford University Press, Inc., 2014), 14.

such a vital aspect of a child's well-being seemed appropriate. As such, exploring the relationship between BPNT and recruiting methods was crucial to better understanding student motivation and informing best practices for teachers.

The need for autonomy is satisfied when people can make decisions for themselves, and it is frustrated when they feel that others have too great of an influence over their lives and decision-making. 18 For example, music education students want to feel like they have a voice in their program, whether in repertoire selection, student leadership groups, or musical decisions for the ensemble. In one study, Paul Evans found that a band student spent twelve times longer practicing a piece she picked out (autonomy) versus one her director chose. 19 When structuring classes, private lessons, or any mode of music instruction, finding ways to keep students intrinsically motivated is essential. While external motivation has value, in terms of BPNT, external motivators such as tangible rewards can potentially suppress students' need for autonomy, as they "convey to the musician that the target behavior is indeed not enjoyable otherwise the reward would not be required."²⁰ A sticker chart for passing off scales, with a pizza party at the end of the quarter for those earning the most stickers, could be an example. This type of incentive and external reward might function as a strong motivator for some students and encourage extra focus and practice time on scales. However, the same activity could function negatively for others by communicating that scales are not enjoyable and require rewards to encourage practice. The researcher does not intend to imply that progress charts or external

¹⁸ Paul Evans and Mark Liu, "Psychological needs and motivational outcomes in a high school orchestra program," *Journal of Research in Music Education* 67, no. 1 (2019): 85, https://doi.org/10.1177/0022429418812769.

¹⁹ Evans, "Self-Determination Theory: An Approach to Motivation in Music Education," 70-71.

²⁰ Paul Evans and Richard M. Ryan, "Intrinsic and Extrinsic Motivations for Music Performance," in *The Oxford Handbook of Music Performance, Volume 1*, ed. Gary McPherson (Oxford: Oxford University Press, Inc., 2022), 589.

rewards have no place in music education. Instead, the intention is to encourage educators to examine how external rewards function for their students while also developing strategies to aid them in taking ownership of their skill development.

Large ensemble music classes are, by nature, social environments. In these settings, the next psychological need for relatedness is paramount. Elisabeth Freer and Paul Evans write, "Satisfaction of relatedness comes through feeling a sense of belonging, and this occurs in the classroom when students feel that they are respected, liked, and supported by both their teacher and their peers." Teachers who only focus on the technical and musical aspects of music performance without considering the social and interpersonal dynamics within a classroom setting will likely be unsuccessful at meeting students' need for relatedness. Robert Gardner takes this idea further, noting, "Maintaining positive and productive professional relationships between all members of your class or ensemble is crucial for establishing an environment where students feel safe and are willing to try their best." Creating a culture where students have strong relationships with their peers and the teacher can help build their social skills and lead to better music-making if there are higher levels of student engagement. If music classrooms meet students' need for relatedness with their teacher and peers, the odds that they will continue studying will likely remain high.

Playing a string instrument with any level of proficiency is complex and requires hard work, dedication, and guidance from a skilled pedagogue. According to BPNT, students have the psychological need for competence – the ability to successfully demonstrate ability and a level of

²¹ Freer and Evans, "Choosing to Study Music in High School," 788-789.

²² Robert Gardner, "Engaging Practices in Strings and Orchestra," in *Engaging Musical Practices: A Sourcebook for Instrumental Music*, ed. Burton, Suzanne L. and Alden H. Snell II (Lanham, Maryland: Rowman & Littlefield, 2015), 66.

success on their instrument and in the larger social context of the orchestra.²³ Therefore, orchestra teachers are encouraged to continually reflect upon and refine their pedagogical skills to aid their students in learning their instruments to the highest level possible, as a lack of musical success can negatively impact future enrollment decisions. Success does not necessarily mean that a teacher's orchestra must always earn the top rating at their formal assessment, win first prize in every competition entered, or that most graduating students become college music majors. However, students should be able to perform at a level of musical competence that enables them, their teachers, their peers, and their parents to take pride in their progress.

Introduction to the Problem

It is difficult for orchestra directors to build and maintain successful programs without sufficient retention from middle to high school. Research on the factors influencing participation in music classes at the high school level reveals that a multi-faceted set of variables affects student enrollment decisions. In his literature review, Seth Pendergast notes that relationships with peers/teachers, required time commitments, and "loss of valued alternatives" when choosing music impact student participation.²⁴ Evans and Freer add to this conversation through their studies using BPNT, writing:

When students feel that they engage in their music class with volition and choice, when they have opportunities to develop and exercise their musical competence, and when they feel connected with their teacher and their peers in the music classroom, they are more able to internalize their value of learning music in the school classroom, and thus to place importance on the music subject in their selection of elective choices in Year 9.²⁵

²³ Evans, "Self-determination theory: An approach to motivation in music education," 68.

²⁴ Seth Pendergast, "Understanding Participation in Secondary Music Classes: A Literature Review," *Update: Applications of Research in Music Education* 39, no. 1 (2020): 40-45, https://doi.org/10.1177/8755123320928479.

²⁵ Freer and Evans, "Choosing to Study Music in High School," 791-792.

Pendergast also addresses BPNT in his review, encouraging teachers "to evaluate the nature of their instruction and classroom environment and adjust pedagogical practices [to satisfy students' psychological needs] to encourage motivation and engagement in their students."²⁶ These findings, however, primarily address the role of a music classroom's day-to-day pedagogical, structural, and social aspects on the enrollment decisions of current students. The problem remains how students moving from middle to high school, assuming they are moving to a program with a different teacher, can make informed elective choices with little direct knowledge of the daily structure and environment of the high school program.

How does a rising ninth-grade cellist assess whether the high school orchestra program will meet his need for competence by challenging him to perform music at a high level? How does a potential student learn whether she will have a voice in the high school program or be another number in the second violin section? With ability instead of grade-based classes, will the strong social bonds formed in the middle school orchestra continue to develop in high school? The discussion on BPNT above shows that these questions could be important to rising high school students. As such, this study sought to explore whether the recruiting methods employed by high school teachers align with the existing research on student motivation using BPNT.

Significance of the Research

Education texts for pre-service teachers often include discussions on recruitment, and teachers in the field frequently identify it as a source of stress.²⁷ While music educators at all levels need to recruit successfully, one can argue that recruiting at the high school level presents

²⁶ Pendergast, "Understanding Participation in Secondary Music Classes: A Literature Review," 44.

²⁷ Kenneth Elpus and Carlos R. Abril, "Who Enrolls in High School Music? A National Profile of U.S. Students, 2009–2013," *Journal of Research in Music Education* 67, no. 3 (2019): 336, https://doi.org/10.1177/0022429419862837.

a unique set of challenges. For example, the pool of potential students from which a high school music teacher can recruit is often significantly smaller than those who recruit beginners. A middle school orchestra teacher recruiting new sixth-grade students can draw students from an entire fifth-grade class. Unless there is a class for beginners, high school orchestra directors can usually only recruit current eighth-grade orchestra students, which may be a smaller group than began in sixth grade due to attrition over a three or four-year period. The results of this study can prove significant in aiding high school teachers in recruiting more effectively from their often limited pool of potential students.

Additionally, research shows that even though high school students may value music as part of their lives, this does not always transfer to them choosing to study music as part of their formal education, as they often "believe it is not interesting, enjoyable, or useful for their future academic pathways or lives..." With the plethora of academic options and other, often competing, electives that students can choose from in high school, the importance for music teachers to effectively communicate why students should join their program is paramount. The findings here can aid teachers in that endeavor. This section aims not to argue that music teachers at the elementary and middle school levels do not face significant challenges with recruitment. Instead, it is to note the challenges unique to high school ensemble teachers, leading to the significance of this study and its ability to equip teachers with knowledge and data to strengthen and transform their recruiting efforts.

²⁸ Freer and Evans, "Choosing to Study Music in High School," 781-782.

Purpose Statement

This applied research study sought to improve the high school orchestra recruiting practice utilizing basic psychological needs theory principles. In addition to synthesizing research on student retention related to BPNT, this study gathered data using semi-structured interviews, an anonymous survey, and qualitative document analysis. The researcher intended this study to identify what makes recruiting methods for high school orchestra teachers effective to provide a research-based framework for teachers to implement in their programs.

Central Research Question

Central Research Question: How can orchestra directors improve their recruitment of high school orchestra students?

Secondary Research Question: How do high school orchestra directors' recruiting methods appeal to the satisfaction of students' psychological needs for autonomy, relatedness, and competence?

Definitions

- 1. **Autonomy**: The freedom to do what "is congruent with the sense of self, and arises with feelings of volition, choice and being the cause of one's behaviour"²⁹
- 2. **Competence**: "a desire to be effective in one's skills, abilities, and interactions in the social environment" ³⁰

²⁹ Evans, "Self-determination theory: An approach to motivation in music education," 70.

³⁰ Ibid., 68.

- 3. **Feeder school**: "A school from which most of the children go to a particular secondary school or college in the same area".
- 4. **Motivation**: the desire to "initiate and persist at behaviors to the extent that they believe the behaviors will lead to desired outcomes or goals"³²
- 5. **Psychological Needs:** "Innate psychological nutriments that are essential for ongoing psychological growth, integrity, and well-being." ³³
- 6. **Relatedness**: the desire for meaningful connections with and acceptance by teachers, peers, and others³⁴ / when students "feel connected to each other and the teacher"³⁵
- 7. **Retention**: maintaining enrollment in a class or program from one year to another³⁶

Summary

This applied research study sought to improve the high school orchestra recruiting practice utilizing basic psychological needs theory. High school teachers may face job cuts and difficulty creating a robust, musically fulfilling program without successful recruitment. There are numerous research studies on motivation in music, though "Few [researchers] acknowledge the theoretical structure of motivation or take into account basic human psychological functions

³¹ Oxford Learner's Dictionaries, s.v. "feeder school, n.," Oxford University Press, accessed June 23, 2023, https://www.oxfordlearnersdictionaries.com/us/definition/english/feeder-school?q=feeder+school.

³² Deci and Ryan, "The "what" and "why" of goal pursuits," 227.

³³ Ibid., 229.

³⁴ Evans, "Self-determination theory: An approach to motivation in music education," 68.

³⁵ Pendergast, "Understanding Participation in Secondary Music Classes: A Literature Review," 39.

³⁶ Hash, "Student Retention in School Bands and Orchestras: A Literature Review," 11.

such as the role of psychological needs."³⁷ Using the lens of Self-Determination Theory and basic psychological needs theory, this study examined the relationship between the recruiting methods of high school orchestra directors and students' psychological needs satisfaction to help strengthen and streamline their recruiting methods. This chapter presented the background of the topic, organizational profile, theoretical background, introduction to the problem, significance of the research, purpose statement, central research question, definitions, and summary.

³⁷ Paul Evans, Gary E. McPherson, and Jane W. Davidson, "The Role of Psychological Needs in Ceasing Music and Music Learning Activities," *Psychology of Music* 41, no. 5 (2013): 612, https://doi.org/10.1177/0305735612441736.

Chapter Two: Literature Review

Overview

The purpose of this study was to provide recommendations to improve the practice of recruiting high school orchestra students. The problem is that it is difficult for orchestra directors to build and maintain robust programs without sufficient retention from middle to high school. This chapter presents the theoretical framework, narrative literature review, and summary.

Theoretical Framework

Pioneered by Edward Deci and Richard Ryan, Self-Determination Theory (SDT) "is centrally concerned with the social conditions that facilitate or hinder human flourishing." Though not explicitly developed for the study of music education, the ever-fluid social dynamic of a classroom makes SDT a well-suited lens through which to study student motivation. Deci and Ryan propose SDT as a psychological theory that examines how a social environment influences motivation to provide research-based methods to "enhance human functioning in real-world settings." The authors continue, noting that to be helpful, a theoretical perspective must not only describe what takes place in a given environment but also explain observed behaviors to better inform strategies for improving, modifying, or duplicating social environments.³

Deci and Ryan developed SDT based on "motivational processes," aiming to discover "what 'moves' people to action." Their analysis of other psychological theories on motivation

¹ Ryan and Deci, Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness, 3.

² Ibid., 6.

³ Ibid.

⁴ Ibid., 13.

found that most treated motivation as a single entity without distinction between different "types, qualities, or orientations." To remedy this concern, they created SDT as a "metatheory" comprised of numerous "minitheories," with Basic Psychological Needs Theory (BPNT) being one of the most prominent. BPNT proposes that humans have basic psychological needs for competence, relatedness, and autonomy that can be "satisfied or frustrated" due to their social environment.

Some motivational theories rely on goal-driven behavior while rejecting needs-based theories. SDT seeks to combine the two, arguing that "Psychological development and well-being...cannot be achieved without addressing the needs that give goals their psychological potence and that influence which regulatory processes direct people's goal pursuits." SDT and BPNT place significant importance on the satisfaction of psychological needs, viewing them as "nutriments that are essential for ongoing psychological growth, integrity, and well-being." In proposing SDT for use in music education research, Paul Evans writes that the needs proposed in BPNT are not a result of one's environment, but rather "a fundamental aspect of the human psyche." Deci and Ryan concur, arguing that the three psychological needs are intricately intertwined and that neglecting one will have detrimental results. 11 Peter MacIntyre, Ben

⁵ Ryan and Deci, Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness, 3.

⁶ Evans, "Self-Determination Theory: An Approach to Motivation in Music Education," 65.

⁷ Ryan and Deci, *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*, 9-10.

⁸ Deci and Ryan, "The "what" and "why" of goal pursuits," 228.

⁹ Ibid., 229.

¹⁰ Evans, "Self-Determination Theory: An Approach to Motivation in Music Education," 67.

¹¹ Deci and Ryan, "The "what" and "why" of goal pursuits," 229.

Schnare, and Jessica Ross write on the motivational aspect of SDT that, over time, behaviors that begin as a result of external stimuli can become internalized.¹² This outcome should be the hope of music teachers at the secondary level. While students may initially require external motivators such as playing tests or seating auditions to encourage practice, the goal should be to develop musicians with an internal drive to grow and improve, both socially and musically.

In their article on applying SDT and BPNT in the classroom, Christopher Niemiec and Richard Ryan explore the goal of developing students' intrinsic motivation. The researchers assert that external motivation paired with positive or negative consequences can stifle a student's "joy, enthusiasm and interest" for learning and replace them with "experiences of anxiety, boredom, or alienation." While Niemiec and Ryan acknowledge that extrinsic motivation has its place in education, they argue that internalized motivation can lead students to engage more willingly with undesirable learning activities when they understand their place in achieving larger goals. For example, when students begin to internalize motivation, they may voluntarily practice scales and technical exercises that are not inherently enjoyable because they understand that doing so will help them play music with more ease, beauty, and skill.

Niemiec and Ryan also explain how competence, relatedness, and autonomy can help students internalize motivation and engage in learning more independently. For autonomy, they suggest that students should have a voice in their education and that teachers should clearly

¹² Peter D. MacIntyre, Ben Schnare, and Jessica Ross, "Self-Determination Theory and Motivation for Music," *Psychology of Music* 46, no. 5 (2018): 700, https://doi.org/10.1177/0305735617721637.

¹³ Christopher P. Niemiec and Richard M. Ryan, "Autonomy, Competence, and Relatedness in the Classroom: Applying Self-Determination Theory to Educational Practice," *Theory and Research in Education* 7, no. 2 (2009): 134, https://doi.org/10.1177/1477878509104318.

¹⁴ Ibid., 138.

explain the benefits of a learning activity. ¹⁵ If students understand why teachers require them to perform specific tasks, it can increase the likelihood that they will undertake them independently. In meeting students' need for competence, Niemiec and Ryan note that it is essential for educators to provide learning opportunities that are "optimally challenging" while providing the instruction and assessment that give students confidence that they can master a particular skill. The authors propose that of the three psychological needs, relatedness most "facilitates the process of internalization [of motivation]." ¹⁶ They assert that students work harder on complex tasks for those with whom they have positive relationships - in the case of education, their teachers and peers. ¹⁷ While much of the research on SDT and BPNT in education focuses on the student experience, Niemiec and Ryan also point out that, according to research, the satisfaction of a teacher's need for autonomy directly impacts their students. They write:

First, the more that teachers' satisfaction of autonomy is undermined, the less enthusiasm and creative energy they can bring to their teaching endeavors. Second, the pressures toward specified outcomes found today in so many educational settings promotes teachers' reliance on extrinsically focused strategies that crowd out more effective, interesting, and inspiring teaching practices that would otherwise be implemented.¹⁸

These findings reinforce the need for administrators to ensure they allow their teachers to have freedom (autonomy) in their instructional planning and decision-making.

SDT does not view motivation in a passive way where people await a negative stimulus to spark a change in behavior or environment. Instead, Deci and Ryan believe that humans respond to their environments and *seek out* activities that satisfy their psychological needs and

¹⁵ Niemiec and Ryan, "Autonomy, Competence, and Relatedness in the Classroom: Applying Self-Determination Theory to Educational Practice," 139.

¹⁶ Ibid.

¹⁷ Ibid., 139-140.

¹⁸ Ibid., 140.

align with their sense of self.¹⁹ For orchestra directors wanting to recruit new students and keep their current ones enrolled, finding ways to create educational environments that students will actively seek out is essential. While the body of research on motivation is valuable, Paul Evans notes that its theoretical underpinnings are inconsistent, making connections across studies and researchers difficult.²⁰ Phillip Hash is less optimistic in his literature review on student retention in school bands and orchestras, writing, "At least 35 years of research, however, has yielded little consistency in determining why students persist in or drop out of instrumental study."²¹ The adoption of SDT as the theoretical framework for several studies in the past twenty years can serve as a solution to this inconsistency and, in the case of this research study, provide an evidence-based foundation for music educators seeking to improve their recruitment and retention.

Narrative Review

While recruitment and retention are of concern for all performance-based classes at the high school level, this study focused primarily on improving orchestral recruiting, as orchestra enrollment often lags behind band and choir. In studying the demographics of high school music students in the United States, Kenneth Elpus and Carlos Abril found that for those students who took at least one semester of music in high school, only 2 percent chose orchestra.²² The importance of effective recruiting as students transition to high school is of particular concern, as

¹⁹ Deci and Ryan, "The "what" and "why" of goal pursuits," 230.

²⁰ Evans, "Self-Determination Theory: An Approach to Motivation in Music Education," 65.

²¹ Hash, "Student Retention in School Bands and Orchestras: A Literature Review," 11.

²² Elpus and Abril, "Who Enrolls in High School Music?," 334.

"Participation decisions often occur at transition points in a student's education."²³ While significant literature exists on why students maintain enrollment in elective music classes, many do not specifically use SDT or BPNT frameworks. However, in reviewing the literature for this study, the researcher found that even in those studies that did not specifically cite SDT or BPNT, the findings often aligned with the psychological needs for competence, relatedness, and autonomy.

Non-SDT Specific Literature

Cecil Adderley, Mary Kennedy, and William Berz interviewed music students to discern their motivation for formal music study in high school. Though the researchers did not use SDT as the framework for their study, their findings align. Utilizing interviews, they found that students valued the high-level performances of their program, implying that participation met their psychological need for competence.²⁴ Respondents frequently cited "social benefits, friendship and benefits of being a group" alongside off-campus events and field trips as part of their decisions to continue studying, aligning with the need for relatedness.²⁵ The connection with the psychological need for autonomy was less direct than competence and relatedness. However, student responses such as "I like playing," and "I've been able to create a lot" imply

²³ Steven M. Demorest, Jamey Kelley, and Peter Q. Pfordresher, "Singing Ability, Musical Self-Concept, and Future Music Participation," *Journal of Research in Music Education* 64, no. 4 (2017): 406, https://doi.org/10.1177/0022429416680096.

²⁴ Cecil Adderley, Mary Kennedy, and William Berz, "'A Home Away from Home': The World of the High School Music Classroom," *Journal of Research in Music Education* 51, no. 3 (2003): 196, https://doi.org/10.2307/3345373.

²⁵ Ibid., 199-200.

that the need for autonomy is satisfied when students freely choose to participate and have decision-making opportunities.²⁶

Susan Hallam found that the need for autonomy played a significant role in whether string players continued their studies. She discovered that a child's motivation was vital and that it "is the child's own attitude to practice and *their* [emphasis added] intention to undertake it which is ultimately of importance in whether they continue to play or not, rather than the support of parents, teachers or friends." While some researchers, such as Dennis James Siebenaler, identify "positive support and involvement at home" as a predictor of music participation, the ability for a student to choose for themselves whether to study music formally is required to meet their psychological need for autonomy. Siebenaler also found connections with competence and relatedness, noting that "positive self-concept in regard to music skills, and the support of peers" impacted music participation.

A study examining motivation in both sports and the arts found that peer relationships played a vital role in students' decisions to continue with and their dedication to their "talent." The appearance of relationships, or relatedness in terms of BPNT, as a significant factor in participation was "considered noteworthy" because the researchers gathered their data using

²⁶ Adderley, Kennedy, and Berz, "'A Home Away from Home': The World of the High School Music Classroom," 198.

²⁷ Susan Hallam, "The Predictors of Achievement and Dropout in Instrumental Tuition," *Psychology of Music* 26, no. 2 (1998): 127-128, https://doi.org/10.1177/0305735698262002.

²⁸ Dennis James Siebenaler, "Factors that Predict Participation in Choral Music for High-School Students," *Research and Issues in Music Education* 4, no. 1 (2006): 6, ProQuest.

²⁹ Ibid.

³⁰ Helen Patrick, Allison M. Ryan, Corinne Alfeld-Liro, Jennifer A. Fredericks, Ludmila Z. Hruda, and Jacquelynne S. Eccles, "Adolescents' Commitment to Developing Talent: The Role of Peers in Continuing Motivation for Sports and the Arts," *Journal of Youth and Adolescence* 28, no. 6 (1999): 750, https://doi.org/10.1023/A:1021643718575.

interviews with "general, nonleading questions to allow them [the participants] to express what was most important to their involvement in the activities."³¹ More than half of the students identified their involvement with sports or the arts as a way to make friends. They also noted that the friendships formed within the activity were more robust than those formed elsewhere.³² Self-determination theory proposes that people seek out activities that align with their sense of self. The importance of relationships found in this study supports this claim, with the researchers writing that adolescents will seek out activities where the values and attitudes of their peers align with their own.³³

String education professor Angela Ammerman was the lead author for a text published in May 2023, *The Music Teacher's Guide to Recruitment and Retention*. The volume includes chapters from various experts in music education who provide research and experience-based advice on building and sustaining music programs. Though none of the chapters explicitly examine student participation using SDT or BPNT, the connections are clear. Angela Harman stresses the importance of competence and that quality matters in a music program. She writes, "Students want to sound good. They join a performing group for a powerful, rewarding, fun experience. A poor rehearsal or concert can be demoralizing and frustrating. Thus, a program with quality recruiting and retention maintains high-performing standards." Warren G. Mize places relationships, or relatedness, as in BPNT, at the center of all recruitment and retention

³¹ Patrick, et. al., "Adolescents' Commitment to Developing Talent: The Role of Peers in Continuing Motivation for Sports and the Arts," 750.

³² Ibid. 751.

³³ Ibid., 752.

³⁴ Angela Harman, "WARNING: Recruiting Invasion in T-1 Chapter: Tips and Tricks from a Suburban Music Teacher," in *The Music Teacher's Guide to Recruitment and Retention*, comp. by Angela Ammerman (Delray Beach: Meredith Music Publications, 2023), 51.

efforts, calling for "collaborative relationships" where teacher and student work together to craft a meaningful musical experience.³⁵ In offering suggestions for setting up a recruiting tour, which can help with retention, Angela Ammerman and Tevis Tucker advise teachers to include students in selecting repertoire and talking about the program to potential students.³⁶ Giving students a voice and opportunities to make impactful decisions can aid in meeting their need for autonomy.

SDT, BPNT, and Student Motivation to Study Music: 2009-2015

Though Deci and Ryan developed SDT and BPNT in the 1980s, it was not until the mid2000s that Paul Evans and Gary McPherson began using the theory for significant research on
the motivation of music students. This portion of the literature review will examine articles
related to music participation and BPNT chronologically, beginning in 2009 with Paul Evans'
(Associate Professor at the University of New South Wales in Sydney, Australia) Ph.D.
dissertation titled "Psychological Needs and Social-Cognitive Influences on Participation in
Music Activities." Evans studied 157 band students over ten years to better understand what
impacted their motivation to continue enrollment in music. He found that when students' basic
psychological needs for competence, relatedness, and autonomy are satisfied, they are more
likely to value "music as important, useful, interesting, and enjoyable, and held greater beliefs in
the benefits of music and music learning." 37

³⁵ Warren G. Mize, "Recruitment, Retention, and Relevance," in *The Music Teacher's Guide to Recruitment and Retention*, comp. by Angela Ammerman (Delray Beach: Meredith Music Publications, 2023), 135.

³⁶ Angela Ammerman and Tevis L. Tucker, "I'm Home! Inventive Strategies for Growing Your Program," in *The Music Teacher's Guide to Recruitment and Retention*, comp. by Angela Ammerman (Delray Beach: Meredith Music Publications, 2023), 149.

³⁷ Evans, "Psychological Needs and Social-Cognitive Influences on Participation in Music Activities," ii.

Relevant to this study, Evans identified the transition to high school as a time when many students ceased instruction.³⁸ The study also revealed that the need for relatedness played a more important role for high school students than elementary or middle school students, perhaps associated with "the heightened importance of social identity through adolescence."³⁹ The findings on autonomy were mixed, with a survey using a psychological needs scale showing little difference in feelings of autonomy at times of peak engagement and of ceasing instruction.⁴⁰ However, the interviews showed that "Autonomy-related experiences were associated with ongoing participation, while heteronomy-related experiences factored into decisions to cease activities."⁴¹

Evans found that students' need for competence was most satisfied when they were highly involved in their music education. 42 Though he notes that one might easily infer that students will continue with activities where they excel, Evans discovered that feelings of competence have additional benefits. The study notes that when students experience competence in a high school music program, for example, they are more inclined to believe that the program is "important and useful." This information can aid high school teachers in recruiting future students in that they could empower their current students to promote the orchestra at recruiting events throughout the school year.

³⁸ Evans, "Psychological Needs and Social-Cognitive Influences on Participation in Music Activities," 146-147.

³⁹ Ibid., 156.

⁴⁰ Ibid., 157.

⁴¹ Ibid.

⁴² Ibid., 153.

⁴³ Ibid.

High school music teachers must often convince incoming students to enroll in orchestra instead of another academic or elective class. In 2010, Gary McPherson and Karin Hendricks sampled over three thousand students across the United States to compare motivation to study music against other subjects. What should concern music educators from their study is that despite ranking music of high interest outside of school, it fell below every other subject when students ranked their interest in subjects offered at school.⁴⁴ The authors suggest that this finding does not mean that students do not value music but that music education, as presented in the United States, might not appeal to significant portions of the student population. ⁴⁵ The researchers offer suggestions to meet students' needs for autonomy as ways to remedy low interest in music as a school subject. In addition to providing students more opportunities for "autonomous, self-directed learning," they suggest expanding the curriculum to allow for more student creativity. 46 They note that the focus of many school programs on evaluation and highstakes performances can give the impression that only the top students are suited for music instruction.⁴⁷ Providing a broader variety of music activities in the curriculum can allow students to see the benefits of music as part of their formal education.⁴⁸

In 2012, Paul Evans, Gary McPherson, and Jane Davidson studied the role psychological needs satisfaction plays in students' decisions to quit music instruction. The researchers chose BPNT to study this topic because the existing research on why students drop out of music classes

⁴⁴ Gary E. McPherson and Karin S. Hendricks, "Students' Motivation to Study Music: The United States of America," *Research Studies in Music Education* 32, no. 2 (2010): 201, https://doi.org/10.1177/1321103X10384200.

⁴⁵ Ibid., 209.

⁴⁶ Ibid.

⁴⁷ Ibid.

⁴⁸ Ibid., 210.

lacked sufficient "psychological or motivational explanations for the behaviour."⁴⁹ They found that when students chose to cease instruction, the satisfaction of their needs for competence, relatedness, and autonomy was lower than at the times of highest engagement.⁵⁰ Students often cited a lack of competence as one of the primary reasons for quitting music instruction, with one student commenting, "I love music but I did not feel as though I had the best skills to perform."⁵¹

Many students in the study cited peer relationships and social concerns as factors in their decisions to quit, while others noted the role of the student-teacher relationship.⁵² Though one student identified work and other activities as impacting his decision to quit after tenth grade, he ultimately credited a poor relationship with his teacher as the primary factor, writing, "But most of all I didn't like my music teacher. That was my main motivation to quit music."⁵³ Lastly, the study found that being forced to participate in music, such as through parental pressure, led to diminished feelings of autonomy.⁵⁴ One student commented, "I felt like I was forced to play it [her instrument] in the first place and then forced to practice music that was not of my choosing so I felt restricted and oppressed."⁵⁵ Statements such as this might prompt teachers to find ways to incorporate students in repertoire selection to help them experience more feelings of autonomy. Aligning with the findings here of Evans, McPherson, and Davidson, Matthew Rotjan

⁴⁹ Evans, McPherson, and Davidson, "The Role of Psychological Needs in Ceasing Music and Music Learning Activities," 601.

⁵⁰ Ibid., 600.

⁵¹ Ibid., 608.

⁵² Ibid., 608-609.

⁵³ Ibid., 609.

⁵⁴ Ibid.

⁵⁵ Ibid., 610.

suggests that "Teachers need to be aware of their students' musical preferences – what they know, listen to, and prefer to play" when selecting repertoire.⁵⁶

For many teachers, satisfying students' needs for competence and relatedness might come more naturally than for autonomy. However, teachers must caution against neglecting autonomy in their approach to education, as all three psychological needs are intertwined.⁵⁷ Arielle Bonneville-Roussy, Robert Vallerand, and Thérèse Bouffard examined the role of autonomy satisfaction in higher education students. Though this thesis focuses on high school students, there are many opportunities for transfer with the Bonneville-Roussy, Vallerand, and Bouffard article. Based on the findings of various studies, the researchers note that "Autonomy-supportive teachers acknowledge their students' emotions and thoughts, give adequate structure and feedback, give a meaningful rationale for tasks and provide opportunities for decision-making."⁵⁸ Particularly in high school, where adolescents are beginning to mature into young adults and think for themselves, acknowledging their thoughts and feelings can significantly impact classroom culture. Additionally, music educators often devote significant class time to technique and fundamentals. If teachers communicate the purpose of such activities effectively, students can become more receptive to a potentially unenjoyable part of their daily class routine.

In 2014, Simone Waters, Gary McPherson, and Emery Schubert published an article examining adolescent males' decisions to participate in elective sports and music. The researchers obtained survey data from 293 boys in grades eight to ten. While the factors

⁵⁶ Matthew Rotjan, "Deciding for Or Deciding with: Student Involvement in Repertoire Selection," *Music Educators Journal* 107, no. 4 (2021): 29, https://doi.org/10.1177/00274321211013879.

⁵⁷ Evans, McPherson, and Davidson, "The Role of Psychological Needs in Ceasing Music and Music Learning Activities," 610.

⁵⁸ Arielle Bonneville-Roussy, Robert J. Vallerand, and Thérèse Bouffard, "The Roles of Autonomy Support and Harmonious and Obsessive Passions in Educational Persistence," *Learning and Individual Differences* 24, (2013): 23, https://doi.org/10.1016/j.lindif.2012.12.015.

influencing enrollment in sports and music varied, the study found that "Facilitator items for music and sport included important subject, continue after school, good at subject, and like teacher." The authors used the Expectancy-Value and Ecological theory in addition to SDT, but the findings noted above imply that the satisfaction of students' basic psychological needs increased the likelihood of enrollment. Students identifying a subject as "important" correlates with autonomy, showing that students value the subject for themselves and freely choose participation. Students desire competence, indicated by the finding that being "good at subject" facilitates enrollment. Finally, research shows that student-teacher relationships factor significantly into music participation. The survey data in this study also supports that claim, with students indicating that liking the teacher positively impacts their decisions to continue in sports or music.

SDT, BPNT, and Student Motivation to Study Music: 2015-Present

Studies show that people regret giving up music instruction. Researchers and teachers who desire to keep students in music must understand what motivates them to practice and persist.⁶⁴ Paul Evans and Gary McPherson undertook a ten-year, longitudinal study to examine

⁵⁹ Simone Waters, Gary E. McPherson, and Emery Schubert, "Facilitators and Impediments for Elective Music and Sport in Adolescent Males," *SAGE Open* 4, no. 2 (2014): 10, https://doi.org/10.1177/2158244014529779.

⁶⁰ Ibid.

⁶¹ Ibid.

 $^{^{62}}$ Evans, McPherson, and Davidson, "The Role of Psychological Needs in Ceasing Music and Music Learning Activities," 609.

⁶³ Waters, McPherson, and Schubert, "Facilitators and Impediments for Elective Music and Sport in Adolescent Males," 10.

⁶⁴ Paul Evans and Gary E. McPherson, "Identity and Practice: The Motivational Benefits of a Long-Term Musical Identity," *Psychology of Music* 43, no. 3 (2015): 408, https://doi.org/10.1177/0305735613514471.

students' musical identity, practice habits, and overall success and drive to study music. ⁶⁵ Prior to beginning instruction, the researchers asked for feedback on how long the students thought they would play their instruments. For the next three years, they measured practice habits through parental feedback and, after ten years, gathered data on how long the participants continued playing. ⁶⁶ Results indicate that the students who continued playing for the longest practiced the most and believed before beginning instruction that they would continue playing for an extended period. ⁶⁷

The findings from Evans and McPherson relate particularly to this thesis on recruiting. In the studied schools with the longest traditions of success, many factors appealing to students' basic psychological needs impacted enrollment decisions. The authors write:

Children in these schools typically reported hearing the ensemble at their school, seeing other children play certain instruments which they either liked the look of or were attracted to the sound, and learning about the camps and extra-curricular opportunities and performances with which children exposed to music learning were involved. The status of the music ensembles within the school was particularly evident, such that the children reported being attracted to learn an instrument because others had said it was enjoyable or because they saw the band as "special" and wanted to be a part of it.⁶⁸

Students wanting to join the program, attraction to the performances, and the desire to participate in camps and other activities with peers align with the satisfaction of needs for autonomy, competence, and relatedness. The researchers propose that a visible, successful music program is vital to recruiting potential students.⁶⁹

⁶⁵ Evans and McPherson, "Identity and Practice: The Motivational Benefits of a Long-Term Musical Identity," 407.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Ibid., 417.

⁶⁹ Ibid.

Elisabeth Freer and Paul Evans published a 2017 study that, of the literature reviewed in this chapter, most directly targets the students at the center of this thesis. The researchers surveyed seventh and eighth-grade students at a boys' high school in Australia to asses their intentions to enroll in music as an elective class in high school. What stood out in this article was the focus on the value students place on music instruction. The results indicated that the satisfaction of a student's basic psychological needs increased the value placed on music instruction and, in turn, their likelihood of continuing enrollment when music classes became non-compulsory. With many high schools continually increasing their elective offerings, it is essential that teachers not only create positive experiences for their students but also craft their lessons and build a program culture that helps them discover the social and academic benefits of music instruction.

The author of this thesis finds that the psychological need for autonomy is the most difficult to address in his classroom. Freer and Evans combine their findings with other researchers to offer teachers direction on satisfying this need in their students. Some suggestions include reducing high-pressure forms of instruction and replacing penalties for incomplete work with "intrinsic motives for effort and improvement." They add that explaining the reasoning behind the chosen learning activities that might be unenjoyable, such as performing scales or etudes, can support student autonomy. If students understand why a teacher is asking them to perform a task, they may still not enjoy it, but they will better understand the teacher's decision-

⁷⁰ Elisabeth Freer and Paul Evans, "Psychological Needs Satisfaction and Value in Students' Intentions to Study Music in High School," *Psychology of Music* 46, no. 6 (2018): 886, 889, https://doi.org/10.1177/0305735617731613.

⁷¹ Ibid., 889.

⁷² Ibid., 891-892.

⁷³ Ibid., 892.

making process. Finally, the researchers write that acknowledging when student morale is low and allowing them to voice their concerns can positively affect their need for autonomy.⁷⁴

Once students enroll in a music class, music educators must work to sustain their motivation to learn. In 2018, MacIntrye, Schnare, and Ross surveyed an international group of music students using four scales based on Self-Determination Theory to examine the interaction of different motivational factors on student engagement. The authors note that in SDT, the regulating factors influencing motivation "lie on a continuum from external to internal regulation."75 Extrinsic and intrinsic sources of motivation are not mutually exclusive, and SDT focuses on the process of externally regulated behaviors becoming more internally regulated.⁷⁶ For example, motivation to practice might begin with an external regulator - a teacher-initiated playing test or practice record, and, over time, become more internally regulated when students learn to value the activity due to increased musical competence and confidence. In their path analysis of data, the researchers found that even amongst experienced musicians, external motivation never extinguished entirely, despite the finding that intrinsic motivation played a significant role in the "maintenance of the motivational system." These findings can encourage teachers whose students need constant external motivators for practice. While it would be ideal for them to initiate practice independently, external motivators never completely extinguish, even amongst professional musicians.

⁷⁴ Freer and Evans, "Psychological Needs Satisfaction and Value in Students' Intentions to Study Music in High School," 892.

⁷⁵ MacIntyre, Schnare, and Ross, "Self-Determination Theory and Motivation for Music," 700.

⁷⁶ Ibid.

⁷⁷ Ibid., 710.

Based on their findings, MacIntrye, Schnare, and Ross propose a "feedback loop" to describe student motivation.⁷⁸ According to their research, students who are eager to learn will work harder to improve their skills, and this increased competence can then strengthen their motivation to continue learning.⁷⁹ Students can enter the loop at any point. If a teacher provides feedback to students that increases confidence in their competence, the drive to learn can increase. Conversely, external factors such as motivating musical repertoire can increase a student's desire to learn and practice, leading to greater competence and an increased drive to continue learning. The authors conclude by suggesting that working to satisfy students' basic psychological needs can increase intrinsic motivation, creating a "virtuous cycle" of music learning and performance.⁸⁰

To effectively recruit students to an orchestra program, a teacher must first understand why those already enrolled choose to continue. In 2018, Paul Evans and Mark Liu used BPNT to study the impact of psychological needs satisfaction on the practice time, intentions to continue study, and self-esteem of (N = 704) high school orchestra students. Like many studies cited above, the researchers found that satisfying a student's basic psychological needs increases the desire to continue music study. The researchers remark, "It seems almost too obvious that feeling a sense of autonomy, competence, and relatedness in an activity would lead a person to want to continue that activity." While this may be true, many teachers may not have explicit knowledge of the impact of psychological needs satisfaction on student motivation, which is part of the drive

⁷⁸ MacIntyre, Schnare, and Ross, "Self-Determination Theory and Motivation for Music," 699.

⁷⁹ Ibid., 710.

⁸⁰ Ibid., 712.

⁸¹ Evans and Liu, "Psychological needs and motivational outcomes in a high school orchestra program," 83.

⁸² Ibid., 95.

behind the research presented in this thesis. In offering teachers practical suggestions to encourage continued participation in orchestra, Evans and Liu write:

Intentions to continue with music learning can also be bolstered by fulfilling psychological needs. Relatedness support, to this end, might take the form of helping students to point out that one of the rewards of studying music is the sense of belonging derived from the cooperation and teamwork involved in a music ensemble. Autonomy can be supported by helping students to see the benefits of choosing to remain in an ensemble and pointing out the utility value of music so that they may identify intrinsic interest in the activity. Competence can be supported by giving students opportunities to work with other students at higher levels so that they have a sense of what kinds of competencies and abilities can be gained by sustaining their involvement in music learning. 83

One year after the Evans and Liu study, Paul Evans once again teamed up with Elisabeth Freer to examine the role of classroom climate on students' decisions to study music in high school. Freer and Evans note that the social environment plays a significant role in the satisfaction or frustration of students' psychological needs. ⁸⁴ In their study, the researchers examined the factors impacting student enrollment decisions when music classes became electives. ⁸⁵ Like many studies noted above, their findings show that psychological needs satisfaction positively impacted student decisions to continue studying music in high school. ⁸⁶ In addressing teacher efforts to recruit and retain students, the authors caution teachers against sudden changes in daily activities and classroom demeanor before students select classes for the following year to encourage participation, noting that students are likely to "see through" these strategies. ⁸⁷ Instead, they suggest ensuring that satisfaction of psychological needs is the focus of

⁸³ Evans and Liu, "Psychological needs and motivational outcomes in a high school orchestra program," 100.

⁸⁴ Freer and Evans, "Choosing to Study Music in High School," 783.

⁸⁵ Ibid., 785.

⁸⁶ Ibid., 791.

⁸⁷ Ibid., 795.

each aspect of the daily classroom environment.⁸⁸ For teachers planning recruiting events for rising high school students, this study encourages them to work diligently with current students to create a robust program culture. A thriving orchestra program will appeal to students' needs for competence, relatedness, and autonomy and naturally attract new members rather than require gimmicks to persuade participation.

It is fitting that the two most recent articles examined in this chapter are literature reviews. Seth Pendergast published a literature review in 2020 focused on participation in secondary music classes, and Phillip Hash specifically looked at school band and orchestra participation in his 2022 review. Pendergast asserts that there are often no "one-size-fits-all solutions" to enrollment concerns due to differences in school sizes, types, and socioeconomic status. He does, however, acknowledge the importance of basic psychological needs satisfaction, writing, "If a music teacher lacks a reputation for musical excellence (competence), has difficulty forming positive relationships with students (relatedness), or rarely offers students opportunities to help determine the direction of the music program (autonomy), students are less likely to enroll." Hash rightly acknowledges that teachers must address practical, non-musical concerns, such as schedule conflicts with core classes, electives, and off-campus activities, when working to recruit and retain students. He concludes with a sobering thought for elective teachers who work tirelessly to grow and maintain enrollment: "Almost all [emphasis added] decisions made by instrumental teachers have the potential to influence student retention."

⁸⁸ Freer and Evans, "Choosing to Study Music in High School," 783.

⁸⁹ Pendergast, "Understanding Participation in Secondary Music Classes: A Literature Review," 39.

⁹⁰ Ibid., 44.

⁹¹ Hash, "Student Retention in School Bands and Orchestras: A Literature Review," 11.

⁹² Ibid.

Though it can be daunting to realize that the countless decisions a teacher makes in school each day impact student enrollment, the literature reviewed here supports the idea that focusing on basic psychological needs satisfaction can help create music programs that consistently attract and retain students.

Summary

The goal of this study was to use basic psychological needs theory to improve the practice of high school orchestra recruiting. Without effective recruiting, secondary music educators may face job cuts and struggle to build robust, well-rounded orchestra programs. This chapter examined literature on Self-Determination Theory, recruiting, retention, and motivation in music education. The literature examination clarified that satisfying students' basic psychological needs for competence, relatedness, and autonomy increases their likelihood of continuing music study. While some literature specifically addressed recruiting methods, most focused on retention within a single program or general student motivation. By synthesizing the cited research findings and drawing upon the data collected through the research methods outlined in the next chapter, the author of this thesis hoped to help orchestra directors streamline and improve their recruiting strategies.

Chapter Three: Procedures

Overview

This applied research study sought to provide recommendations to improve the high school orchestra recruiting practice utilizing basic psychological needs theory. It is difficult for orchestra directors to build and maintain successful programs without strong retention from middle to high school. Claxton and Michael identify that one of the reasons for conducting applied research is "to further understand a problem of practice as a means of improving achievement or practices." Once the researcher identifies and studies the problem, the next step is gathering and analyzing data to offer "evidence-based solutions" for solving the problem.² This chapter details the data collection method procedures for the anonymous online survey, semi-structured interviews, and document analysis that the researcher used to gather data for the study. It also includes a discussion of the researcher's hypotheses for the research questions.

First Data Collection Method Procedures

The first data collection method was an anonymous online survey to measure how high school orchestra directors' recruiting methods appealed to students' basic psychological needs. The researcher based his survey on the 21-item Basic Psychological Needs Satisfaction Scale that Deci, Ryan,³ and Gagné ⁴ developed from an earlier measure of needs satisfaction in the

¹ Claxton and Michael, A Step-by-Step Guide to Conducting Applied Research, Third Edition, 3.

² Ibid.

³ Edward L. Deci and Richard Ryan, "The "what" and "why" of goal pursuits." *Psychological Inquiry* 11, 227-268.

⁴ Marylène Gagné, "The Role of Autonomy Support and Autonomy Orientation in Prosocial Behavior Engagement," *Motivation and Emotion* 27, no. 3 (2003): 199-223.

workplace. The scale developed by Deci, Ryan, and Gagné measured general needs satisfaction using a Likert-type scale (1-7) where respondents rated whether each item is not true at all (1), somewhat true (4), or very true (7). The original scale had seven questions to measure autonomy, six to measure competence, and eight to measure relatedness. The researcher re-wrote each question to examine how high school orchestra directors felt their recruiting methods appealed to their potential students' needs for competence, relatedness, and autonomy. He changed one relatedness question to a competence question to make seven questions for each psychological need. An online survey, identified by Claxton and Michael as "one of the easiest and quickest ways to conduct a survey," allowed the researcher to gather data from a large pool of potential respondents quickly.

The researcher used Microsoft Forms to create and administer the survey. After receiving approval from the Liberty University Institutional Review Board, he utilized convenience sampling by posting a link to the survey on his personal Facebook page and in the private Facebook group "School Orchestra and String Teachers." The administrators of the "School Orchestra and String Teachers" group review all posts for relevance before allowing them to appear on the page. Though convenience sampling is not the most desirable sampling procedure, 5 the researcher felt that the large number of Facebook "friends" that he has who teach high school orchestra, along with the more than 11,000 members of the "School Orchestra and String Teachers" page, provided far-reaching access to the most high school orchestra directors.

In addition to social media posts, the researcher used purposeful sampling to send email invitations to high school orchestra directors, inviting them to participate in the survey. Director emails were gathered from publicly available websites such as school directories and school

⁵ Claxton and Michael, A Step-by-Step Guide to Conducting Applied Research, Third Edition, 114.

orchestra websites. The researcher worked to find contacts for directors from programs with proven success and areas of the country known for their robust string programs. Collecting survey data from a greater number of qualified participants helped make the findings more applicable to teachers in a variety of settings. Additionally, the demographic questions paired with the study criteria outlined in the information sheet linked on the first page of the survey helped to maintain the credibility of the findings.

The researcher analyzed the survey data by creating three subscores for each psychological need, as Deci, Ryan, and Gagné suggested on their original instrument. For the six questions worded negatively (i.e., 7. Students are deterred from joining my program because my high school ensembles do not perform at a high level.), responses were subtracted from eight and then included in the average for the appropriate psychological need. This method gave the researcher a clear metric to assess to what extent high school orchestra directors' recruiting methods appealed to students' basic psychological needs for competence, relatedness, and autonomy. He also used Microsoft SPSS software to analyze the data further, with the findings presented in the next chapter.

Survey Questions

The first section of the survey contained a link to an information sheet for participants to review before continuing. The second section contained questions to gather demographic information about the participants. These questions served as a way for the researcher to better understand the participants' educational backgrounds and teaching situations. Additionally, they allowed the researcher to examine whether factors such as length of time teaching, level of education, or type of school where a teacher works had any relationship to the recruiting methods of the participants. The demographic questions are listed below.

1.	How lo	ng have you been teaching?			
	a.	0-5 years			
	b.	6-10 years			
	c.	11-15 years			
	d.	16-20 years			
	e.	21-25 years			
		26+ years			
2.	What is	your highest level of education?			
	a.	Bachelor's			
	b.	Master's			
	c.	Doctorate			
		Other:			
3.		d you receive your initial teacher certification training?			
		As part of a bachelor's program in education			
		As part of a master's program in education			
		Through an alternative certification program			
		Other:			
4.		t type of school do you teach?			
		Public School			
		Charter School			
	c.	Private School			
		Other:			
5.	What grade levels do you teach as part of your teaching contract? (Select all that apply)				
		High School			
		Middle School			
		Elementary School			
		Other:			
6.		ubjects do you teach as part of your teaching contract? (Select all that apply)			
		Orchestra			
		Band			
		Choir			
		Music Theory			
		Music Appreciation			
		General Music			
	_	Guitar			
		Piano			
	i.	Other:			

The third section of the survey contained twenty-one questions to measure how the recruiting methods of the participants appealed to the basic psychological needs of their potential students. Questions one, four, eight, eleven, fourteen, seventeen, and twenty measured

autonomy. Questions three, five, seven, ten, thirteen, fifteen, and nineteen measured competence. Questions two, six, nine, twelve, sixteen, eighteen, and twenty-one measured relatedness. The questions worded negatively for reverse scoring were four, seven, eleven, sixteen, eighteen, and nineteen. Below are the twenty-one psychological needs questions from section three of the survey.

Please read each item carefully and indicate how true it is for your recruiting methods, potential students, and teaching situation.

Use the following scale to respond:

1 2 3 4 5 6 7

not at all true somewhat true very true

- 1. My recruiting strategies show potential students ways they can have a voice in the orchestra program.
- 2. My recruiting strategies communicate that potential students will develop strong friendships with the other students in orchestra.
- 3. My recruiting methods highlight the musical skill of my high school ensembles.
- 4. I pressure students to join orchestra in high school.
- 5. My recruiting efforts reinforce the musical abilities of my potential students.
- 6. My recruiting efforts convey that I have a positive relationship with my students.
- 7. Students are deterred from joining my program because my high school ensembles do not perform at a high level.

- 8. I communicate to potential students that I value their opinions and ideas concerning the orchestra.
- 9. My recruiting efforts highlight the friendships that students will develop in high school orchestra.
- 10. My recruiting efforts introduce students to how the technical and musical skills developed in high school will help them improve as musicians.
- 11. My recruiting methods convey to students that I make most of the program decisions.
- 12. My recruiting methods convey my students like me as a teacher.
- 13. My recruiting efforts highlight the sense of accomplishment students feel from their participation in orchestra.
- 14. My recruiting efforts demonstrate that I care about my students.
- 15. My recruiting efforts communicate the opportunities students will have to perform and demonstrate their skills in high school.
- 16. My potential students worry about making friends in high school orchestra.
- 17. Students want to join my program because they feel it is a place where they can be themselves.
- 18. Students choose not to join my program because they do not like me as a teacher.
- 19. Students choose not to join orchestra in high school because they do not feel competent in their musical abilities.
- 20. I explain to potential students why we include technical exercises in our regular class routines.
- 21. Students join my program because of my positive reputation as a teacher.

As noted above, questions one, four, eight, eleven, fourteen, seventeen, and twenty measured autonomy. Research suggests that students desire a voice in their education and that teachers should clearly explain the benefits of a learning activity. The researcher crafted these questions to measure to what extent orchestra directors communicated the role that students play in their program, how they communicated their rationale for including undesirable learning activities, and whether directors pressured students to join their programs.

A significant component of SDT and BPNT is an individual's "desire to be effective in one's skills, abilities, and interactions in the social environment [competence]." With many high schools offering a seemingly endless choice of elective courses, orchestras must perform at a high level to attract new members and appeal to their need for competence. The researcher designed the questions on competence (3, 5, 7, 10, 13, 15, and 19) to measure whether high school directors consistently conveyed their orchestras' musical and technical abilities to potential students. Additionally, the questions sought to ascertain whether directors felt that their potential students had confidence in their current level of musical competence.

BPNT proposes that students desire meaningful connections with and acceptance by teachers, peers, and others – the need for relatedness.⁸ A classroom orchestra setting will meet this need when students "feel connected to each other and the teacher." Survey questions two, six, nine, twelve, sixteen, eighteen, and twenty-one aimed to assess how high school directors

⁶ Niemiec and Ryan, "Autonomy, Competence, and Relatedness in the Classroom: Applying Self-Determination Theory to Educational Practice," 139.

⁷ Evans, "Self-determination theory: An approach to motivation in music education," 68.

⁸ Ibid.

⁹ Pendergast, "Understanding Participation in Secondary Music Classes: A Literature Review," 39.

conveyed positive student-teacher and peer relationships within their programs during their recruitment activities.

Second Data Collection Method Procedures

The researcher utilized semi-structured interviews as the second data collection method. Structured interviews allow for clear comparisons between participant answers; however, there is no room for deviation from the pre-determined questions to allow the researcher "to dig deeply into a situation or issue." Semi-structured interviews allowed pre-determined questions crafted to help answer the research questions while retaining the freedom to follow up with unstructured questions to dive further into participant responses.

The researcher used purposeful sampling to select five high school orchestra teachers to participate in the interviews. Citing Creswell and Patton, Claxton and Michael identify purposeful sampling as the most commonly used in applied research because it allows the researcher to select participants who can "inform the research problem" and who will be "information-rich." All participants chosen for interviews had proven records of success in building orchestra programs and producing ensembles that performed at high levels, as evidenced by ratings from concert evaluations, performance invitations, and awards from significant music education conferences. Participant One was a nationally known string educator who regularly presented at major conferences, received guest conducting invitations, and maintained a large and successful public school orchestra program. Participant Two taught in a high school with a high minority population in a low socioeconomic area. She had previously held positions in more affluent communities, so the researcher hoped to ascertain whether she

¹⁰ Claxton and Michael, A Step-by-Step Guide to Conducting Applied Research, Third Edition, 70.

¹¹ Ibid., 74.

found differences in recruiting high school orchestra students in regions of varying socioeconomic levels. Participant Three had developed a large program known for its student leadership, growth, and performance success. With this participant in particular, the researcher hoped to gain insight into how his recruiting methods appealed to students' need for autonomy. Participant Four taught middle and high school in the Northeastern United States. As the only participant who taught middle and high school, the researcher hoped to gain insight into how his teaching schedule impacted high school recruitment. Participant Five spent most of her career teaching middle school and was in her first five years of full-time high school teaching. The researcher interviewed her to see how her middle school experience might inform her recruiting efforts as a high school director.

The researcher sent a recruitment email to each participant after obtaining approval from the Liberty University Institutional Review Board (IRB) to conduct research. The participants' emails were publicly available on their school or orchestra websites. At the Liberty IRB's request, the researcher changed participant consent forms to information forms that did not need to be signed and returned. Interviews took place via the online Zoom video conference platform. The researcher recorded the Zoom interviews and stored the files on his password-locked computer to maintain confidentiality. Following the interviews, the researcher used Otter.ai and a manual review of the audio recordings to create written transcriptions. The transcriptions were then analyzed qualitatively using Delve to determine themes between the interviews and if the basic psychological needs theory principles were evident in the responses.

Interview Questions

- 1. Demographic information:
 - How long have you taught high school orchestra?
 - At what type of school do you teach?
 - How many different high school orchestra classes do teach each day and what is your total enrollment?
- 2. How would you describe the role of recruiting in your job as a high school orchestra director?
 - Music educators often identify recruiting as a source of stress.¹² In examining retention in school bands and orchestras, Phillip Hash writes, "Almost all [emphasis added] decisions made by instrumental teachers have the potential to influence student retention."¹³ Though recruitment and retention strategies may differ, the importance of both can weigh heavily on teachers. This question aims to discover to what extent recruitment factors into the role of a high school orchestra teacher.
- 3. What strategies do you use to recruit rising ninth-graders (or tenth-graders is a 10-12 HS) for your orchestra program?
 - Research shows that students often evaluate their participation in extracurricular activities at times of transition.¹⁴ With high schools often offering an everincreasing number of elective options, string teachers must effectively communicate the importance of their classes and why students should choose to enroll.¹⁵
 - o Possible Followup Questions:
 - 1. From where do you recruit most of your rising ninth-grade students?
 - 2. When during the school year does each recruiting activity take place?
 - 3. How has your recruiting framework changed or adapted throughout your career and with recent challenges related to navigating the COVID-19 pandemic?
 - 4. What role do your current students play in the recruitment process?

¹² Elpus and Abril, "Who Enrolls in High School Music?," 336.

¹³ Hash, "Student Retention in School Bands and Orchestras: A Literature Review," 11.

¹⁴ Demorest, Kelley, and Pfordresher, "Singing Ability, Musical Self-Concept, and Future Music Participation," 406.

¹⁵ Christopher Selby, *Habits of a Successful Orchestra Director* (Chicago: GIA Publications, 2021), 11-13, ProQuest Ebook Central.

- 4. Describe the aspects of your program that you feel are most important to convey through your recruiting activities.
 - While it is the job of an orchestra teacher to address any concerns or challenges, such as scheduling, that may impede a child from joining orchestra, current research suggests "the best practice may be a consistent emphasis on how learning activities support psychological needs." This question seeks to discover whether the aspects of a program that directors consider essential to convey to potential students relate to psychological needs satisfaction.
 - Possible Followup Questions:
 - 1. How do you highlight the musical skills of your students through the recruiting process?
 - 2. Do your potential students ever get to work with you as an instructor before enrolling in your program?
 - 3. How do you highlight the peer relationships within your program when recruiting new students?
 - 4. Do you find that the parents of your potential students play a role in their decisions whether to enroll in high school orchestra?
- 5. Which of your recruiting strategies would you identify as the most impactful in influencing students to join your program and why?
 - Research shows that satisfying a student's psychological needs for competence, relatedness, and autonomy leads to an increased desire to study music.¹⁷ This question seeks to determine whether the recruiting strategies teachers identify as most impactful in students' decisions to enroll in their classes appeal to students' needs for competence, relatedness, or autonomy.
- 6. Why do you think rising ninth-grade string players might enroll in your school but choose **not** to enroll in orchestra?
 - Research shows that though high school students may value music as part of their lives, this does not always transfer to their choosing to study music as part of their formal education, as they often "believe it is not interesting, enjoyable, or useful for their future academic pathways or lives...." Research also indicates that scheduling conflicts and interest in other activities influence student enrollment decisions. If the directors identify the frustration of students' needs for competence, relatedness, or autonomy as factors influencing their decisions not to

¹⁶ Freer and Evans, "Choosing to Study Music in High School," 795.

¹⁷ Freer and Evans, "Psychological Needs Satisfaction and Value in Students' Intentions to Study Music in High School," 881.

¹⁸ Freer and Evans, "Choosing to Study Music in High School," 781-782.

¹⁹ Hash, "Student Retention in School Bands and Orchestras: A Literature Review," 11.

enroll in high school orchestra, it could aid directors in tailoring their recruiting efforts to address these concerns.

- Possible Followup Questions:
 - 1. How do other class options at your school influence the enrollment decisions of your potential students?
 - 2. Describe the various high school options that rising ninth-graders have in your district.
 - 3. Have you successfully recruited students in tenth, eleventh, or twelfth grade who chose not to enroll in orchestra as ninth graders?

"This concludes the questions I have prepared for this interview. Is there anything else you would like to add?"

Third Data Collection Method Procedures

The third data collection method for this study was a qualitative document analysis. At the end of each interview, the researcher requested that the interview participants share any documents they used as part of their recruiting efforts, such as recruitment letters, email blasts, social media posts, or posters. The requested documents were classified as temporary, as the teachers could change, adapt, or discontinue using them over time. Recruiting is often a multifaceted process that involves more than a single classroom visit or runout concert. Analyzing recruitment documents allowed the researcher to explore further how the interview participants approached recruiting and whether there was a connection to basic psychological needs theory.

Collecting documents from a different set of participants than those selected for the interviews was an option. However, the researcher felt that the purposeful sampling used to select interview participants established a set of participants who would have carefully crafted recruiting documents. Additionally, combining an interview and document analysis from the same teacher allowed the researcher to study their recruiting framework as a whole. Once

²⁰ Claxton and Michael, A Step-by-Step Guide to Conducting Applied Research, Third Edition, 150.

collected, the researcher analyzed the documents using qualitative coding. Claxton and Michael define coding as "A systematic process of identifying key passages and text, then identifying the relationships between the words, phrases, and concepts." After the initial coding process, the researcher worked to identify themes within the codes to ascertain the intent behind each document and examine whether they appealed to potential students' needs for competence, relatedness, and autonomy.

Hypotheses

Central Research Question: How can orchestra directors improve their recruitment of high school orchestra students?

Hypothesis: High school orchestra directors can improve their recruiting methods by appealing to their potential students' psychological needs for competence, relatedness, and autonomy.

Discussion:

Research shows that student decisions to cease music instruction are often associated with thwarting one or more of their psychological needs.²² On the other hand, the literature supports the idea that "Intentions to continue with music learning can also be bolstered by fulfilling psychological needs."²³ The researcher hypothesized that high school orchestra directors who used this knowledge to inform their recruiting practices would be more effective in recruiting new students to their programs.

²¹ Claxton and Michael, A Step-by-Step Guide to Conducting Applied Research, Third Edition, 152.

²² Evans, McPherson, and Davidson, "The Role of Psychological Needs in Ceasing Music and Music Learning Activities," 600.

²³ Evans and Liu, "Psychological needs and motivational outcomes in a high school orchestra program," 100.

Secondary Research Question: How do high school orchestra directors' recruiting methods appeal to the satisfaction of students' psychological needs for autonomy, relatedness, and competence?

Hypothesis: High school orchestra directors will use various recruiting strategies that appeal to all three of a student's psychological needs, either intentionally or unintentionally. The researcher predicts that the recruiting methods of the high school directors will appeal most to students' need for relatedness.

Discussion:

In studying the high school music classroom, Adderley, Kennedy, and Berz found that "The social climate [of the classroom] emerged as a pervasive element in the study as students noted the importance of relationships for their well-being and growth." While the three psychological needs are interconnected, the student-teacher and peer relationships in the orchestra classroom can serve as the foundation for experiences of competence and autonomy. When relationships within a program are strong, students will be more likely to put forth consistent effort, which can increase competence.

Furthermore, when students have strong and stable relationships, they will likely feel more comfortable when allowed to have a voice in their program.

Summary

This applied research study sought to improve the high school orchestra recruiting practice using basic psychological needs theory. Without effective recruiting, secondary music educators may face job cuts and struggle to build robust, well-rounded orchestra programs. This

²⁴ Adderley, Kennedy, and Berz, "'A Home Away from Home': The World of the High School Music Classroom," 190.

chapter outlined the research procedures for data collection and analysis. The first data collection method was an anonymous online survey distributed on a private Facebook page for string teachers, the researcher's personal Facebook page, and via email. The second data collection method involved semi-structured interviews with five successful high school orchestra teachers. Finally, for the third data collection method, the researcher requested recruiting documents from the interview participants for qualitative analysis. The researcher obtained approval from the Liberty University Institutional Review Board before contacting participants and collecting data.

Chapter Four: Findings

Overview

The purpose of this study was to improve the high school orchestra recruiting practice utilizing the principles of basic psychological needs theory. If high school teachers are unsuccessful at recruiting new students, they will struggle to maintain balanced, high-performing ensembles. Additionally, low enrollment numbers can negatively impact job security and require teachers to teach subjects other than orchestra to satisfy their contracts. The data collection methods for this study sought to ascertain best practices for recruiting high school orchestra students and how teachers appealed to students' psychological needs for competence, relatedness, and autonomy. This chapter contains the findings from the anonymous online survey, semi-structured interviews, and qualitative document analysis.

First Data Collection Method Findings

The researcher collected responses from the anonymous online survey for two weeks. After posting links to the survey on social media and sending direct emails, the survey received 51 responses. Five of the responses were omitted, as three were test entries by the researcher, and two others were from teachers who, according to their responses to the demographic questions, did not teach high school. Removing the unusable responses resulted in a final sample size of 46 participants (N = 46).

Demographics

The demographic questions in the second part of the survey gathered data on the number of years of teaching, the highest degree obtained, how educators received their initial certification training, what type of school they taught at, grade levels taught, and subjects taught. The table below shows results for the number of years of teaching.

Table 1. Number of Years Teaching

	N	%
0-5	6	13.0%
6-10	9	19.6%
11-15	9	19.6%
16-20	11	23.9%
21-25	5	10.9%
26+	6	13.0%

Of the 46 respondents, 32.6% had bachelor's degrees, 52.2% had master's degrees, and 10.9% had doctoral degrees. A large majority, 82.6%, of the teachers surveyed received their certification as part of a bachelor's degree program, with 6.5% receiving certification as part of their master's degree, 6.5% through an alternative certification program, and 4.3% either had a provisional license or no state licensure at all. All but five, or 89.1%, of the respondents taught in a public school, with 4.3% working in private schools and 6.5% in charter schools.

Most teachers, 60.9%, taught only high school, while the rest taught high school and another grade level. Table two below indicates the breakdown of grade levels taught. Most respondents (54.3%) taught orchestra and other subjects such as music theory or guitar, while 45.7% taught only orchestra.

Table 2. Grade Levels Taught

	N	%
HS	28	60.9%
HS/MS	11	23.9%
HS/ES	4	8.7%
HS/MS/ES	2	4.3%
HS/Other	1	2.2%

Reliability

The researcher based the third section of his survey on the 21-item Basic Psychological Needs Satisfaction Scale that Deci, Ryan, and Gagné developed from an earlier measure of needs satisfaction in the workplace. Since he rewrote the questions to apply to high school orchestra recruiting, testing the instrument's reliability was essential. Interitem reliability was measured using Cronbach's Alpha. For all 21 psychological needs questions, Cronbach's Alpha was .765, indicating an overall acceptable level of internal consistency. The alphas calculated for each psychological need subscore were lower, though, indicating the need to possibly rework the survey for future research, particularly the questions on autonomy. The Cronbach's Alphas were .699 for the relatedness questions, .591 for the competence questions, and .459 for the autonomy questions.

¹ Edward L. Deci and Richard Ryan, "The "what" and "why" of goal pursuits," *Psychological Inquiry* 11 (2000): 227-268.

² Marylène Gagné, "The Role of Autonomy Support and Autonomy Orientation in Prosocial Behavior Engagement," *Motivation and Emotion* 27, no. 3 (2003): 199-223.

³ Siti Shahirah Saidi and Nyet Moi Siew, "Investigating the validity and reliability of survey attitude towards statistics instrument among rural secondary school students," *International Journal of Educational Methodology* 5, no.4 (2019): 655, https://doi.org/10.12973/ijem.5.4.651.

Descriptive Statistics

The tables below provide the means and standard deviations for each question from section three of the survey. The data is divided into subsections based on the psychological need each question sought to measure. Appendix G contains an ordered numerical list of the 21 questions regarding psychological needs satisfaction that corresponds with the question numbers below. Questions marked with an "R" were worded negatively and thus rescored for statistical analysis by subtracting the participants' scores from eight. Participants used a Likert-type scale to assign a score of one to seven for each question, with one indicating "not true at all," four "somewhat true," and seven "very true."

For the relatedness questions, question six, "My recruiting efforts convey that I have a positive relationship with my students," had the highest mean at 6.70 and the smallest standard deviation at .662. Question six was also the question with the largest mean of all twenty-one questions in the psychological needs section of the survey. Question sixteen, "My potential students worry about making friends in high school orchestra," had the lowest mean at 5.1 and the second highest standard deviation at 1.343.

Table 3. Descriptive Statistics – Relatedness Questions Means and Standard Deviations

	N	Mean	Std. Deviation
2: Communicate Friendship Development	46	6.30	1.093
6: Positive Relationships	46	6.70	.662
9: Highlight Friendship Development	46	6.07	1.389
12: Like Me as A Teacher	46	5.83	1.122
16: Worry about making friends (R)	46	5.13	1.343
18: Students Do Not Like Me As A Teacher (R)	45	6.22	1.020
21: Positive Reputation as a Teacher	46	5.63	1.142
Valid N (listwise)	45		

The highest-scoring competence question, with a mean of 6.33 and a standard deviation of 1.175, was question seven, "Students are deterred from joining my program because my high school ensembles do not perform at a high level." Since this question was worded negatively, the survey responses given by teachers were each subtracted from eight, as indicated by the creators of the original survey that served as the foundation for the one developed for this study. The mean in Table 4 below was created from the reverse scoring procedure, and the mean of the raw scores was 1.67, just slightly above the rating of "1," which was "not true at all." Question nineteen, "Students choose not to join orchestra in high school because they do not feel competent in their musical abilities," was another reverse-scored item and also had the lowest mean of all competence questions at 4.46. The raw score mean before rescoring was 3.54. Both the raw and re-scored means indicate a value of "somewhat true," as indicated by the Likert-type scale.

Table 4. Descriptive Statistics – Competence Questions Means and Standard Deviations

	N	Mean	Std. Deviation
3: Highlight Musical Skill	46	5.91	1.458
5: Reinforce Musical Abilities	46	5.67	1.367
7: Students Deterred by low HS Level (R)	46	6.33	1.175
10: Highlight Skills Development	46	5.00	1.333
13: Sense of Accomplishment	46	6.09	1.007
15: Opportunities to Perform	46	6.11	.948
19: Lack Confidence In Their Musical Abilities (R)	46	4.46	1.629
Valid N (listwise)	46		

For the autonomy questions, the highest scoring question with a mean of 6.63 was number fourteen, "My recruiting efforts demonstrate that I care about my students." The standard deviation for this question was the smallest of all twenty-one psychological needs questions at .645. In looking back at question fourteen on the survey from which the researcher based the one for this study, it appears that the researcher could re-word his question to convey the psychological need for autonomy better, as was done in the original. As written, question fourteen appears to measure the need for relatedness more than autonomy. The lowest scoring autonomy question with a mean of 4.02 was the negatively worded, thus rescored, question eleven, "My recruiting methods convey to students that I make most of the program decisions." Four on the Likert-type scale indicated "somewhat true."

Table 5. Descriptive Statistics – Autonomy Questions Means and Standard Deviations

	N	Mean	SD
1: Voice in Orchestra	46	4.89	1.303
4: I Pressure Students to Join (R)	46	4.89	1.386
8: Value Opinions and Ideas	46	5.35	1.636
11: Methods Convey I Make Most Program Decisions (R)	46	4.02	1.570
14: Care about my students.	46	6.63	.645
17: They Can Be Themselves	46	5.83	1.060
20: Explain Technical Exercises	46	4.63	2.069
Valid N (listwise)	46		

After analyzing the means for each question within the three psychological need subsets, the researcher calculated each group's means and standard deviations. The mean for the relatedness questions was 5.98 with a standard deviation of 1.22, indicating that respondents' recruiting methods appealed most to this psychological need. The mean for competence was 5.65, with a standard deviation of 1.43. Autonomy had the lowest mean score at 5.18 and the highest standard deviation at 1.63, indicating that respondents addressed this need most infrequently in their recruiting efforts and varied the greatest in their responses.

ANOVA

The researcher performed one-way ANOVAs to compare the effect of the six demographic categories on the twenty-one psychological needs scale items. No statistical significance was found between the categories of years teaching or subjects taught and the psychological needs scale items. A one-way ANOVA revealed that there was statistical significance at the .05 level between degree earned and two questions, pressuring students to join orchestra, F(3, 42) = 3.252, p = .031, and reinforcing the musical abilities of potential students,

F(3, 42) = 5.683, p = .002 (see Appendix H). Pairwise comparisons of the means using Tukey HSD revealed no significant differences for pressuring students to join orchestra responses and participants at different degree levels. For reinforcing musical abilities, pairwise comparisons of the means using Tukey HSD (Appendix I) revealed significant differences between those with bachelor's degrees and doctoral degrees and between those with master's degrees and doctoral degrees (p < .05).

A one-way ANOVA found statistical significance at the .05 level in terms of how respondents received their initial teacher certification and three questions (See Appendix J). Statistical significance was found for question seven, students deterred by low-performing high school ensembles (F(3, 42) = 2.947, p = .044), question ten, introducing the benefits of technical and musical skill development (F(3, 42) = 3.122, p = 036), and question twenty, explaining the benefit of including technical exercises in class (F(2, 42) = 3.145, p = .035). Pairwise comparisons of the means using Tukey HSD revealed no significant differences in the means of explaining the benefit of including technical exercises in class and how participants received their initial teaching certification. For students deterred by low-performing high school ensembles, pairwise comparisons of the means using Tukey HSD (Appendix K) revealed significant differences between those receiving their initial teaching certification through a bachelor's degree program and those who used an alternative means of certification (p = .044). For introducing technical and musical skill development benefits, pairwise comparisons of the means using Tukey HSD revealed significant differences between those receiving their initial teaching certification through a master's degree program and those who listed their certification as "other" (p = .039).

A one-way ANOVA (see Appendix L) revealed that there was statistical significance between the means of school type and question seven, students being deterred by low-performing high school ensembles, F(2, 43) = 21.012, p = <.001. Tukey's HSD Test for multiple comparisons (Appendix M) found that the mean value of students deterred by low-performing high school groups was significantly significant between public and private school teachers (p = <.001) and between private and charter school teachers (p = <.001). A one-way ANOVA also found statistical significance between school type and question nineteen, potential students' lack of confidence in their musical abilities, F(2, 43) = 6.220, p = .004. Tukey's HSD Test for multiple comparisons found that the mean value of students lacking confidence in their musical abilities was statistically significant between public and charter school teachers (p = .036) and private and charter school teachers (p = .003).

Lastly, a one-way ANOVA (see Table 7 below) revealed statistical significance between grade levels taught and students being deterred from joining high school orchestra due to low-performing ensembles, F(4, 41), p = .027. The responses for subjects taught were grouped into two categories: orchestra only or orchestra and other subjects. As such, Tukey's HSD Test for multiple comparisons was unnecessary.

Table 6. ANOVA – Grade Levels Taught and Question 7

7: Students Deterred by low HS Level (R)					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14.235	4	3.559	3.048	.027
Within Groups	47.873	41	1.168		
Total	62.109	45			

Second Data Collection Method Findings

The second approach used in this study was interviews. Semi-structured interviews consisting of six questions with suggested follow-up questions were conducted with five participants. The purpose of these interviews was to focus on the role of recruiting in the duties of a high school orchestra teacher, ascertain what methods teachers use to recruit students, and explore factors that might negatively impact student decisions to continue in orchestra from middle to high school. The researcher used purposeful sampling to select five high school orchestra teachers in varying socioeconomic situations with records of recruiting and musical success. Before beginning each interview, participants were provided with an information sheet on the study. Each interview lasted approximately fifteen minutes and was recorded and transcribed for data analysis.

Description of Participants

Participant One had twelve years of experience teaching high school orchestra and taught at a large, affluent public high school in Georgia. He earned a Ph. D. in music education and had experience at the collegiate level as a string education professor. As a high school director, his groups consistently earned top ratings at state evaluations and were invited to perform at the Midwest Band and Orchestra Clinic. In addition to teaching high school orchestra, he served as a clinician and consultant for a major music publishing company. Participant One brought valuable insight to the study with his wealth of experience and musical success.

Participant Two taught in a public high school in Virginia with a total minority enrollment of approximately sixty percent. She had a master's degree and 14 years of experience teaching high school orchestra. She was in her second year at her current job and had previously held positions teaching middle and high school in schools of varying socioeconomic levels

throughout the southeast. Participant Two had successfully grown the program's size and achieved musical excellence in all her positions, as demonstrated by enrollment numbers and superior ratings at adjudicated events. Participant Two brought a unique perspective to the study, as she had experience building programs in schools with diverse student populations.

Participant Three had been teaching for eighteen years and currently taught orchestra full-time at a public high school in South Carolina. In addition to maintaining high enrollment numbers, this participant was known throughout his region for developing strong student leaders with great dedication to the orchestra program. His orchestras achieved performance success as evidenced by superior ratings at adjudicated events and performances at his state music educators' conference. The researcher chose this participant due to his demonstrated success but also because, as a percussionist, he had experience teaching band and could bring a different perspective on recruiting and program development than teachers with a string background.

Participant Four had ten years of experience teaching high school orchestra at a public high school in West Virginia. The program in his school district began in 2008, and he began teaching there in 2010. He began his career teaching only middle school, and his role expanded to include the high school as the program grew. He was actively involved in all levels of the strings program in his county and provided valuable insight regarding recruitment from middle to high school when the teacher remains the same.

Participant Five had four years of experience teaching high school orchestra in an affluent public school in South Carolina. Before teaching high school, she spent twenty-four years teaching middle school orchestra. She was the first orchestra director at her high school, which opened in August of 2020. In her time at the school, she grew the program from one orchestra to three, earned superior ratings at state and regional competitions, and placed students

in region and all-state ensembles. Participant Five taught in a school with demographics and scheduling similar to the researcher's school.

Interview Results

The researcher used Delve to analyze the interview transcripts. The process began by assigning codes to each sentence or phrase of the participants' responses. Claxton and Michael define codes as "keywords, phrases, or concepts identified in the transcripts" that the researcher can use to find relationships within the data. Some of the codes assigned included words like relationships, success, commitment, and visibility. Five main themes developed through analyzing the transcripts and codes: collaboration, program reputation, musical performance, consistency, and scheduling. Table 7 below shows the identified themes, codes associated with each theme, and participant quotes supporting each theme. Table 8 includes the frequency of each code from the transcript analysis.

⁴ Claxton and Michael, A Step-by-Step Guide to Conducting Applied Research, Third Edition, 79-80.

Table 7. Semi-Structured Interview Themes, Codes, and Supporting Quotations

Theme	Code	Quotations	
Collaboration	Collaborate	"We also do a collaborative music, department-wide performance at the high school." Participant 4	
	Relationships		
	Student Mentors	"Me and the middle school director see eye to eye, we work	
	Parents	really well together." Participant 2	
	Community		
Program Reputation	Reputation	"You know, kids tell kids, hey, I'm joining orchestra, they travel or hey, this is fun, you know?" Participant 3	
	Visibility		
	Testimonials	"And they want to be here because they've heard it from other students." Participant 2	
	Pride		
	Ongoing		
	Media		
Musical	Performance	"They know that we're going to assessment playing grades,	
Performance	Success	you know, four or five and six, and getting superiors." Participant 2	
	Musical Excellence	1 articipant 2	
		"But the results kind of speak for themselves." Participant 3	
Consistency	Consistency	"There's a whole like list of things that I tried to instill in	
	Commitment	my students that aren't necessarily musical things, but things that will make them into better people that are better	
	Honest	workers, better collaborators." Participant 1	
	Benefits		
	Expectations	"The fun comes through the consistency and the	
	Encourage	performance." Participant 3	
Scheduling	Scheduling	"Guidance usually works really well with me to make	
	Academics	something happen." Participant 5	
	Enrollment	"As for as like strategie ook - believe - 1-t - f time - 1-1 1	
	Lunch	"As far as like strategic schedulinga lot of times kids have to make choices about things." Participant 4	
	Sports		

Table 8. Themes and Frequency of Codes from Semi-Structured Interviews

Themes	Codes	Occurrences across data
Collaboration	Collaborate	44
	Relationships	28
	Student Mentors	7
	Parents	6
	Community	5
Program Reputation	Reputation	19
	Visibility	13
	Testimonials	10
	Pride	4
	Ongoing	3
	Media	3
Musical performance	Performance	23
	Success	8
	Musical Excellence	5
Consistency	Consistency	23
	Commitment	11
	Honest	7
	Benefits	8
	Expectations	5
	Encourage	2
Scheduling	Scheduling	37
	Academics	7
	Enrollment	1
	Lunch	6
	Sports	1

Collaboration

Collaboration was the theme and code that appeared most frequently in the qualitative analysis of the interview transcripts. Teachers identified robust and collaborative working

relationships with their colleagues as one of the driving factors behind their strong recruitment efforts from middle school to high school. Participant Three stated that his middle school colleagues allowed him to stop in anytime to work with students to build positive social and musical connections. Participant Two pinpointed her middle school colleague's role in building up her program, saying, "He knows that where the students are going is a great and wonderful place, and he just makes sure he communicates that with his kids." Furthermore, all teachers identified collaborations between high and middle school students as positively influencing recruitment. Participant Five relayed that her current freshman recalled an 8th-grade performance with high school students at their fall concert as "the best thing ever."

Relationships were a code closely associated with the theme of collaboration. Participant Three identified the student-teacher relationship between himself and the middle school students as necessary for building a program, saying, "My goal, as the high school director, is that every sixth grader knows who I am, knows that they can talk to me." Participant Five concurred, citing helping out at middle school concerts so that middle school students became familiar with her as a positive way of building relationships with potential students. Participant Four used side-by-side concerts and rehearsals with middle and high school students to build positive relationships between students using student mentors. Participant Two identified the community feel of the orchestra – peer, parental, and student-teacher relationships – as a strong influence on recruiting new students.

Program Reputation

Program Reputation, both from within the school district and in the community at large, was another theme that emerged from transcript analysis and coding. All five participants made statements that fit the codes of reputation, visibility, media, testimonials, pride, or ongoing.

When asked which recruiting strategy was most influential in influencing middle school students to join her program, Participant Two replied, "I think it's reputation, yeah. They know that they're coming to a great program and they want to be here because they've heard it from other students. So it's word of mouth, reputation." Participant One commented on the importance of visibility with potential students, saying, "So I was there [at their performance evaluation] visiting and made sure that I made myself visible after they performed and told them great job." Participant One also stressed the role of pride in a program, adding, "What aspects are most important to convey? I think sense of community, sense of musicianship excellence,…there's a pride factor there, so pride and community."

For Participant Three, recruiting was rooted in creating a well-established and respected program. When asked about the most effective strategy for recruiting new students, he replied, "Well, I mean, really, when when I talk about my process, like I talk about to talk about everything [emphasis added] we do, because it's like I don't consider recruiting is something so solely different from building a program [emphasis added]." Participant One also felt that no single event made recruiting effective but that a program and teacher's reputation were the dominant forces in the recruiting process. He said on the role of recruiting in his job as a high school orchestra director, "I would describe it as a daily activity. I mean, like how you treat the kids, how they see you [reputation], how they interact with each other, the camaraderie that they have, all impacts what [sic] your ability to retain them. And the recruiting piece is, again, like a lot of word of mouth."

Musical Performance

As a musical subject, it was no surprise to the researcher that the participants all cited musical performance as an essential piece to their recruiting efforts. Participant Two cited her

orchestras's assessment ratings as helpful in recruiting new students, saying, "They know that we're going to assessment playing grades, you know, four or five and six and getting superiors." All five participants included some form of showcase performance to highlight the music skills of their students. Participant Five took her students on a recruiting tour to perform for middle school orchestra students. Participants One and Two also sought opportunities to perform for potential students. Participants Three and Four saw value in middle and high school students performing together, with Participant Three noting, "We give the older students a chance to kind of be side by side with the middle schoolers and kind of help them along." While musical performance as a theme had crossover with the themes of program reputation and collaboration, the researcher felt that the non-performance aspects of program reputation (i.e., community visibility) and collaboration (i.e., collaboration between colleagues) warranted keeping the themes separate.

Consistency

The need for consistency of instruction, performance, expectations, behavior, and communication was a common theme amongst all five transcripts. Participant Four made sure that students in middle school saw high school orchestra as consistent with what they learned to expect as a middle school orchestra student, saying, "So I think I'm setting them up and showing them that it's just a continuation of the opportunities that they've had throughout middle school." Participant Three felt that the consistency and longevity of the string instructors in his district played an essential role in providing a learning environment that encouraged participation. He was an eighteen-year veteran, and his middle school colleagues taught in the district for a combined twenty-four years, giving students and parents a clear idea of what they could expect when joining the orchestra program.

Participant Three was the most adamant on the need to be consistent in dedication, instruction, and commitment from sixth through twelfth grade. When asked what he felt was the most crucial aspect of his program to convey to potential students, he replied, "Well, I mean, consistency...when we talk to a student, whether it be sixth-grade, seventh-grade, eighth-grade, ninth-grade...we talk to them as an investment...We're like, hey, we're investing in you for seven years; that's what we're doing, and if you want to be part of that, then we want you to be a part of what we do." Participants Three and Four stressed the need to be honest and upfront with students and parents about what to expect in high school orchestra and what it would take to be successful for four years. In describing how he communicated the planning required to fit orchestra into all four years of a high school career, Participant Four commented, "So just making sure parents and families are informed of all of those options [summer classes to free up the school-year schedule], and taking advantage of them to be able to be involved in the classes." Participant Three said that he did not need to try and bargain with students to join his program because he and the middle school director were consistent in their expectations and were confident in the product they had to offer. He stated, "We don't have to have a carrot to dangle...the kids know, and the parents know what they're getting into because we've been consistent through the years."

While the researcher had the option of merging this theme and related codes with the theme of program reputation, he chose to include it separately due to the noted importance of teacher consistency and longevity. A program might have a strong reputation with high-performing ensembles, student dedication, and community support. However, the participants were clear that showing potential students that orchestra is a long-term commitment and that the instructor's expectations are well-established led him to include it as its own theme.

Additionally, the researcher credits the consistency within his district in terms of teachers staying in their positions for multiple years with the growth the programs experienced in the past decade. When he began his current job, the researcher was the fifth teacher in five years for some of his freshmen. One of his middle school feeders also hired a new director the same year the researcher started his position. The consistency of instruction and expectations that both teachers provided helped each program more than double in size during the tenure of the two teachers.

Scheduling

All five interview participants discussed scheduling and its impact on recruitment and retention. Participant Four made sure that he planned positive experiences around the time of course registration to encourage rising high school students to select orchestra. Participant Five touted her positive relationships with the guidance department to help ensure students can fit orchestra into their schedules. She also felt it was important for her potential students to know they could sign up for orchestra and other elective classes. Participant Three lamented how sometimes students are not given accurate information from middle school guidance counselors regarding scheduling, leading them to believe they cannot fit orchestra into their schedules. He also noted how audition results can impact student scheduling options, saying, "Because we have audition groups...where the kids audition kind of affects where they can or can't be placed."

Participant Two, who had taught in schools of varying socioeconomic levels, remarked how, in more affluent communities, the parents' desire for rigorous academic classes caused her to continually remind students and parents that "music is good for you" and should be part of a well-rounded school schedule. Participant One identified Advanced Placement classes as one potential reason why middle school string players might enroll in his school but not choose to continue with orchestra. For current students, Participant One and Participant Four had students

who gave up their lunch period to enroll in orchestra, as the rest of their schedule was full with other academic and elective offerings. While some participants made sure to communicate with current and potential students how they could work orchestra into their high school schedules, as a whole, the participants identified scheduling as a factor that often negatively influenced student participation in high school orchestra.

Third Data Collection Method Findings

The researcher gathered recruiting documents for qualitative analysis as this study's third data collection method. In his literature review aimed at understanding participation in secondary music classes, Seth Pendergast writes that music participation is "a complex issue where multiple factors influence enrollment." Effective recruitment requires a multifaceted approach that will require more than one activity. Claxton and Michael write that "Documents MUST be used to answer the central research question" for a study. The central research question in this study was, "How can orchestra directors improve their recruitment of high school orchestra students?" The researcher felt that analyzing recruiting documents would offer detailed insight to help answer the central research question.

The participants of the semi-structured interviews, chosen using purposeful sampling, were asked to provide recruiting documents for this portion of the study. All directors who participated in the interviews had proven track records of success in building high-level programs with large numbers of students. Combining interview data and document analysis data from the same group helped provide a solid framework on which to base the recommendations from this study. All participants from the interviews provided documents for analysis except for

⁵ Pendergast, "Understanding Participation in Secondary Music Classes: A Literature Review," 38.

⁶ Claxton and Michael, A Step-by-Step Guide to Conducting Applied Research, Third Edition, 150.

Participant One. The documents provided included a letter to rising ninth-grade students, an orchestra flier, a PowerPoint with pictures representing significant achievements, emails inviting students to attend high school concerts and performances, a leadership team application, an ensemble acceptance form, and a scheduling framework with accompanying Google Form. The study participants created the collected documents themselves, making them primary sources, and they could all "change over time or be discarded after use," making them temporary documents.⁷

Qualitative Document Analysis Results

The researcher analyzed the recruiting documents by hand. The process began by assigning codes to each sentence, phrase, or picture in the documents. Some codes assigned included words like performance, success, trips, and scheduling. Four main themes developed through analyzing the documents and codes: musical performance, positive relationships, extramusical benefits, and scheduling. Table 9 below shows the identified themes, codes associated with each theme, and the frequency of each code from the document analysis.

⁷ Claxton and Michael, A Step-by-Step Guide to Conducting Applied Research, Third Edition, 150.

Table 9. Themes and Frequency of Codes from Qualitative Document Analysis

Themes	Codes	Occurrences Across Data
Musical Performance	Performance	22
	Excellence/Success	17
	Growth	3
	Collaboration	3
	Commitment	3
Positive Relationships	Enthusiasm/Positive	13
	Relationships	11
	Leadership	3
	Autonomy	3
	Pride	2
	Community	1
Extramusical Benefits	Trips	9
	External Benefits	7
	Fun	4
Scheduling	Scheduling	12

As orchestra is a performance-based class, it was no surprise that musical performance emerged as the most prominent theme in the document analysis. The codes of performance and excellence/success occurred most frequently. Participant Five's slideshow used during her recruiting tour to the middle schools featured pictures from school concerts, competitions that resulted in first-place trophies and superior ratings, and daily classroom rehearsals. Participant Two emailed middle school teachers with information about her program to share with potential students. In the document, she highlighted her students' performance at a community Hispanic Heritage event and invited the middle school students to perform. In addition to highlighting performance opportunities, the documents provided potential students with evidence of musical excellence and success. In a letter to recently accepted students, Participant Three's document

stated, "The Honors Orchestra has a history of excellence, and as a member, you will be expected to maintain its level of success." Participant Five included her program's success in state evaluations and placement of students in honors and youth orchestras in her recruiting letter mailed to middle school orchestra students.

In addition to touting performance opportunities and musical excellence/success, the documents featured three references to growth. Participant Five taught at a high school in its third year of existence. In her recruiting letter to middle school orchestra students, she wrote, "We already have grown into two orchestra classes and [I] am looking forward to our continued growth and musical excellence." Additionally, she noted how, in her previous job as the middle school director in the high school's primary feeder, she helped to double the orchestra enrollment. Participant Four used a flier for a benefit concert for the orchestra programs in his district to invite the eighth-grade string students to collaborate with the high school orchestra on a performance in the high school performing arts center.

Positive Relationships

Documents from all four participants focused on positive relationships with teachers, peers, and the community, offering a positive and welcoming message to potential students. Phrases such as "We are looking forward to each of you joining us," "Congratulations and welcome," and "I am excited to meet you and am thrilled you are joining us in the fall" appeared frequently. Documents from Participant Five contained frequent references to positive peer relationships. Her recruiting flier stated, "Play beautiful music, have fun, *make friends* [emphasis added] and go on amazing trips!" The flier and her slideshow contained numerous photos of students socializing at restaurants, backstage at concerts, and during various social activities. Participant Five's recruiting letter noted her goal of creating a "family-like atmosphere" in the

orchestra program. Participant Three's welcome letter to accepted students encouraged them to take pride in their participation and acceptance and congratulated them on their achievements. The letter stated, "This is an exclusive opportunity that not all high school students have the privilege to be a part of." There was also a focus on how participation in orchestra allowed students to be a part of the broader school community. Participant Two noted in her letter to middle school directors how participating in their Hispanic Heritage celebration involved over 700 people from the school and community.

Extramusical Benefits

While music and performance-related codes appeared most often in the document analysis, there was a distinct focus on the extramusical benefits of orchestra enrollment. The codes for the theme of extramusical benefits were trips, external benefits, and fun. Participant Five's documents contained the most references to trips. Her recruiting letter contained a paragraph dedicated to their recent success at a performance competition during a trip to Tennessee. She noted their first-place ranking and awards for violin soloist and the cello section. Her recruitment flier contained pictures from recent trips highlighting performance and social activities and mentioning "amazing trips" near the top of the document. Lastly, Participant Five's recruiting slideshow highlighted recent trips with pictures of students performing, swimming, eating, and socializing.

The external benefits code applied to statements such as "Band, Choir, and Orchestra are available to take as an honors credit" from a music schedule guide provided by Participant Four. The recruiting flier from Participant Five also touted the honors credit benefit from enrolling in high school orchestra. Some external benefits were less formal, such as a pizza party offered by Participant Two in her email inviting rising ninth-grade students to her high school's spring

concert. Participant Five credited orchestra participation with helping to develop skills outside of music that could benefit students in all areas of life. Her recruiting letter noted that, in addition to the continual development of musical skills through high school orchestra participation, students would "develop other skills, including teamwork, time management, responsibility, commitment, appreciation for each other and the joy of working together to create music to be shared with you, each other and our community." Participant Five's recruiting flier made a similar claim: "Colleges look for well-rounded students that are team players, work towards a common goal, exhibit responsibility, reliability & commitment; all skills you will gain in orchestra." The promise of fun events also appeared throughout the documents, with teachers highlighting social events and festive activities that orchestra students would have access to as program members.

Scheduling

Many high schools today offer myriad elective choices for students that can compete with orchestra for inclusion in a student's schedule. The documents from Participants Four and Five included substantial content on scheduling for potential students. Participant Five told potential students through her recruiting flier that students could enroll in orchestra and participate in sports, writing, "Many orchestra students are athletes too!" She also noted, "Students can take orchestra & other arts classes along with academics and athletics."

Participant Four's documents were almost solely related to helping potential students navigate schedule concerns to ensure continued participation in orchestra. A document compiled jointly by the band, orchestra, and choir directors provided sample schedules for all four high school years that could enable students to participate in one, two, or three music ensembles. The directors pointed out that their classes were not competing with other academic or elective options, saying, "The music faculty is here to share opportunities to maintain music participation

alongside honors and AP classes, CTE programs, and other electives." The document also offered summer and online classes in health and gym, and taking a class during a regularly scheduled lunch, as options for creating space in a schedule for orchestra. Participant Four also shared a Google Form that his department sent to all rising ninth-grade students to help them navigate the scheduling of music classes. The top of the form stated, "Numerous opportunities will present themselves in high school,. [sic] We are ready to share pathways to maintain music as a meaningful part of your high school experience." The rest of the form gathered information on the student's instrument, previous courses taken, and additional extracurricular activities that the directors used to help students ensure that they could continue music study in high school.

Discussion

The findings from the three data collection methods offered varying but complementary insight into high school orchestra recruiting. For example, the survey results revealed that the questions regarding the psychological need for relatedness had the highest mean score, and the qualitative document analysis revealed the theme of trips as a prominent focus of the documents. Question six from the survey, "My recruiting efforts convey that I have a positive relationship with my students," had the highest mean score of all twenty-one psychological needs questions, indicating that directors made conscious efforts to highlight their strong relationships with their students in their recruiting efforts. These findings aligned with previous research by Adderley, Kennedy, and Berz that used interviews to determine students' motivation for participating in high school music programs. The researchers found that the social aspects of a music program were "pervasive" in their participants' responses⁸ and that students placed importance on their

⁸ Adderley, Kennedy, and Berz, "A Home Away from Home': The World of the High School Music Classroom," 190.

relationship with the teacher and group trips. The findings from this study, coupled with those of other researchers, indicated that a focus on positive teacher and peer relationships and the success of past group trips could positively influence student recruitment.

The psychological need for relatedness was most prominent throughout the data. In addition to having the highest mean score in the survey, codes for relationships, collaborate, student mentors, and leadership occurred most frequently in the interview and document analysis. In the interviews, participants consciously ensured that middle school orchestra students knew and felt comfortable around them. Participant Five said, "I tried to let the eighth graders know who I am early in the year." Participant Three was even more explicit with his intentions: "My goal as the high school director is that every sixth grader knows who I am, knows that they can talk to me. I'm at every one of their concerts." The document analysis contained many codes for positivity and enthusiasm, showing that the teacher was excited and eager to work with potential students. The transition to high school can be intimidating, and for orchestra, students sign up for a class where they could potentially have the same teacher for four years. Research shows that the student-teacher relationship is vital in meeting the need for relatedness. Niemiec and Ryan write, "In the classroom, relatedness is deeply associated with a student feeling that the teacher genuinely likes, respects, and values him or her." For orchestra, positive student-teacher relationships are not only for positive classroom environments but also for musical outcomes. Niemiec and Ryan state that students will work harder on challenging tasks, such as learning a new skill or difficult piece of repertoire, for teachers with whom they

⁹ Adderley, Kennedy, and Berz, "A Home Away from Home': The World of the High School Music Classroom," 190.

¹⁰ Niemiec and Ryan, "Autonomy, Competence, and Relatedness in the Classroom: Applying Self-Determination Theory to Educational Practice," 139.

have positive relationships.¹¹ The combination of previous research and data analysis from this study supports the conscious efforts of high school directors to build positive relationships with current and future students.

The theme of musical performance, closely tied to the psychological need for competence, appeared frequently in all three data collection methods. The competence questions in the survey showed that high school teachers generally communicated performance opportunities and the musical success of their current students when recruiting new students. Of the 46 usable responses, all but six scored a one or a two, indicating "not true at all," on question seven, "Students are deterred from joining my program because my high school ensembles do not perform at a high level." The only teacher who scored this question higher than a four was one of the two private school respondents who scored a seven for this question, indicating that it was "very true" that the level of his students deterred potential recruits. This score, coupled with the three from the other private school respondents, is likely why the ANOVA revealed a statistical significance between type of school and question seven.

All five survey participants indicated that musical performance was crucial in recruiting. Whether it was performing for potential students, collaborating with them on joint performances, or highlighting the musical success of current high school students, the theme appeared frequently in all transcripts. Musical performance was also the most frequent theme in the quantitative document analyses, with the code of "performance" appearing most often. The documents featured pictures of school performances and performance competitions from spring trips, in addition to touting student placement in honors ensembles and group ratings at state performance evaluations. When Evans and McPherson examined what factors influenced

¹¹ Niemiec and Ryan, "Autonomy, Competence, and Relatedness in the Classroom: Applying Self-Determination Theory to Educational Practice," 139.

students' long-term musical identity, they found that "Children in these schools [with music programs that had traditions of excellence] typically reported hearing the ensemble at their school, seeing other children play certain instruments which they either liked the look of or were attracted to the sound, and learning about the camps and extra-curricular opportunities and performances with which children exposed to music learning were involved." While not necessarily related to high school music enrollment, this quote indicates that younger students hearing older students perform and learning about opportunities within a program leave a positive, lasting impression. The findings from this study and the reviewed research support recruiting efforts such as performance tours to middle schools, joint performances, and a focus on trips and other extracurricular activities in recruiting material and presentations.

The psychological need for autonomy presented itself in the data collection and analysis, though its presence was not as strong or clear as those for relatedness and competence. The analysis of the survey results showed that high school directors indicated the lowest scores for the autonomy questions. The only question with a mean above six was question fourteen, which, mentioned earlier in this document, would need to be rewritten for future studies, as it measures relatedness as worded more than autonomy. After question fourteen, the question with the highest mean was seventeen, "Students want to join my program because they feel it is a place where they can be themselves."

Though not explicitly correlated with autonomy, the interview theme of program reputation is related. The directors referred to students wanting to join their programs because they had heard positive sentiments from other students or parents. Participant Two noted that students wanted to be in his program "because they've heard it from other students." Similarly, Participant Three remarked how kids talk to each other about their activities and choices, saying,

"You know, kids tell kids, hey, I'm joining orchestra, they travel or hey, this is fun, you know?" This data reinforces previous research findings that students do not want to feel forced, coerced, or without a say in their education. Instead, they desire to make decisions for themselves and to have a voice in their educational decisions. As Paul Evans writes in his article on applying self-determination theory in music education, "Autonomous behaviour is congruent with the sense of self, and arises with feelings of volition, choice and being the cause of one's behavior. It is the opposite of controlled behaviour." 12

The qualitative document analysis also revealed findings that relate to the psychological need for autonomy. The code "autonomy" appeared three times within the theme of positive relationships. A leadership application from Participant Three required the concertmaster of each orchestra to be able to "tune and lead the ensemble through daily warm-ups" and "conduct the ensemble through a chosen chorale." Additionally, the section on manager requirements asked potential candidates to "Create a list of procedures for the locker room and bookbag storage room." Such activities would allow students to control some aspects of the classroom environment and be in charge of making decisions for themselves and the ensemble, thus fulfilling their psychological need for autonomy.

While the data collected for this study showed the importance of focusing on psychological needs satisfaction in recruitment, the need to address scheduling concerns and planning emerged as a central focus of the interviews and document analysis. Interview participants did not feel that scheduling conflicts significantly affected their enrollment, though they ensured students knew how to fit orchestra into their schedules with other desired courses. Interview Participant Four let potential students know about summer options in health and gym

¹² Evans, "Self-determination theory: An approach to motivation in music education," 70.

to open up the schedule for orchestra, and Participant Five also included information in her recruiting documents, letting students know that they could still take orchestra with other arts classes and sports. However, the scheduling discussions still addressed psychological needs. Participants Three, Four, and Five referred to relationships with guidance counselors either positively or negatively impacting students' ability to fit orchestra into their schedules. Participant Five touted her positive relationships with the guidance department at her school for helping students find creative scheduling solutions. Participants Three and Four noted how misinformation from middle school counselors sometimes confused potential students and how they needed to work well with high school counselors to ensure students knew their options.

The findings from this study strongly supported the role of psychological needs satisfaction in high school orchestra recruiting. While teachers may appeal to psychological needs without knowing it, intentionally addressing the areas of competence, relatedness, and autonomy in recruiting trips, collaborations, and documents can positively influence students' decisions to join orchestra. In addition, the data analysis revealed that high school teachers must also have a thorough knowledge of their high school's scheduling framework and how to communicate scheduling options to potential students.

Summary

This applied research study sought to improve the high school orchestra recruiting practice using basic psychological needs theory. Effective recruiting is vital for high school orchestra teachers to maintain job security and build successful programs. This chapter outlined the findings from the three data collection methods: an anonymous online survey, semi-structured interviews, and qualitative document analysis. The chapter concluded with a thorough

discussion of the findings and the relationships between the themes of each data collection method.

Chapter Five: Recommendations

Overview

The purpose of this study was to improve the high school orchestra recruiting practice utilizing the principles of basic psychological needs theory. If high school teachers are unsuccessful at recruiting new students, they will struggle to maintain balanced, high-performing ensembles. Additionally, low enrollment numbers can negatively impact job security and require teachers to teach subjects other than orchestra. This study analyzed research on recruiting and retention and utilized an anonymous survey, semi-structured interviews, and qualitative document analysis to gather data. The findings and examination of prior research support the use of basic psychological needs theory in recruiting practices in addition to a focus on the external benefits of enrollment in orchestra. This chapter contains recommendations for high school directors to use in planning their recruitment efforts for new students. The headings in this chapter are recommendations, roles and responsibilities of stakeholders, resources needed, timeline, and summary.

Recommendations

The central research question for this study was, "How can orchestra directors improve their recruitment of high school orchestra students?" with a secondary research question of, "How do high school orchestra directors' recruiting methods appeal to the satisfaction of students' psychological needs for autonomy, relatedness, and competence?" The literature reviewed for this study demonstrated that meeting students' basic psychological needs for competence, relatedness, and autonomy increases the likelihood of continued enrollment in a school music program. In his literature review on student retention in school music programs,

Phillip Hash noted, "Focusing on students' social, aesthetic, and intellectual needs might improve retention in school ensembles. Members might quit when other activities or classes meet their needs to a greater extent." To encourage continued enrollment, orchestra teachers must ensure that their programs aid students in improving their musical skills (competence), foster positive relationships between peers and the teacher (relatedness), and allow students to have a voice in the program (autonomy). While most of the reviewed literature focused on continued enrollment within a single program, the researcher confidently asserts that transferring the findings on BPNT within a program to recruitment efforts can answer this thesis's primary research question. The discussion and presentation of findings in Chapter Four revealed how orchestra teachers appealed to the basic psychological needs of potential students in their recruiting processes, addressing the secondary research question, and the additional factors that impacted student enrollment in high school orchestras.

Seth Pendergast writes that secondary music participation "is a complex and multifarious problem" and that "It is difficult to unravel the intersecting factors that influence music participation to determine the actionable steps music teachers and advocacy leaders might take to encourage music participation."² This study sought to help solve this problem and aid high school orchestra directors in recruiting by synthesizing the reviewed literature and data from the anonymous survey, interviews, and document analysis. The recruiting framework provided below can aid high school teachers in strategically planning research-based recruiting methods throughout the school year. While many factors impact student enrollment decisions, and there

¹ Hash, "Student Retention in School Bands and Orchestras: A Literature Review," 11.

² Pendergast, "Understanding Participation in Secondary Music Classes: A Literature Review," 39.

may not be a "one-size-fits-all" solution, high school directors can adapt the recommendations to fit their school, resources, community, and timeline. Table 10 below provides a recruiting activity for each month of the school year that can help high school orchestra directors appeal to the psychological needs satisfaction of potential students. The data collected for this study also revealed the importance of addressing scheduling concerns with potential orchestra students and the influence of external benefits, such as trips and grade point averages, in orchestra participation. The suggestions here address the scheduling concerns of potential students and highlight the many external benefits of orchestra participation.

Table 10. Yearly Recruiting Framework for High School Orchestra Directors

Timeline	Recruiting Activity	
September	Middle School Sectionals/Clinics	
October	Attend Middle School Fall Concerts	
November	Recruiting Letters / Student-Composed Congratulatory Letters	
December	Holiday Runout Performances / Attend MS Winter Concerts	
January	Check-In with Guidance, Scheduling Email to Potential Parents	
February	Recruiting Tour	
March	High Schooler for a Day	
April	Switch Day with MS Feeder(s)	
May	Attend MS Spring Concerts / Invite MS Students to HS Concert	
June	Placements Email / Highlights for the Year Ahead	

Middle School Sectionals/Clinics

The beginning of a school year can present challenges for collaborative performances between middle and high school students as teachers at all levels focus on establishing procedures and developing the technical and musical foundations for the year. While joint

³ Pendergast, "Understanding Participation in Secondary Music Classes: A Literature Review," 39.

performances might be successful in some situations, the high school director offering to run sectionals, honors orchestra preparation clinics, or whole group rehearsals can be an effective recruiting tool at the beginning of a school year. Such activities can appeal to all three basic psychological needs of potential students. Take running a clinic for middle school students auditioning for an honors orchestra as an example. If a high school director offers to run a violin sectional after school to help students prepare, his advice can aid the students in becoming more successful, satisfying their need for competence. The opportunity to interact positively with the high school director can help make potential students more comfortable with a new teacher in the transition to high school, thus satisfying their need for relatedness.

Lastly, running an honors orchestra audition clinic is a recruiting tool that can satisfy a middle school student's need for autonomy. Research shows that "Teacher strategies including non-controlling language, providing explanatory rationales, acknowledging students' feelings, and allowing an aspect of choice would help the student value the activities they are given and encourage a sense of autonomy." Should the high school director begin a clinic with a technical exercise that is new to the students, explain how it can help them learn their audition music, and acknowledge that learning a challenging audition excerpt can be frustrating, they can assist students with their need for autonomy.

Attend Concerts

Interview participants One, Three, and Five from this study all remarked how they attended the concerts of their middle school feeders as part of their recruiting efforts. High school orchestra teachers should collaborate with their middle school colleagues to avoid scheduling concerts or major rehearsals on the same nights. Coordinating schedules can serve as

⁴ Freer and Evans, "Choosing to Study Music in High School," 795.

a courtesy to parents who may have siblings in both programs and ensure that the high school director and some high school students can attend and assist with middle school concerts. Being present to help tune students before a concert is an easy way for high school directors to build positive relationships and familiarity with their potential students, satisfying their need for relatedness. A few words of encouragement, such as "Great concert – you all have a wonderfully rich tone!" as students transition off stage, can support their need for competence. Suppose a high school director invites student leaders to volunteer at the middle school concerts with tuning, stage set-up and tear-down, and transition logistics. In this example, middle school students can witness firsthand the positive peer relationships that high school orchestra participation can foster (relatedness) and show them that high school students want to be a part of the program and are doing so of their own volition (autonomy). Not only is attending middle school concerts helpful to the students, but it can also work to develop a positive professional relationship between the middle and high school orchestra directors. Participant Two from this study cited seeing "eye to eye" and "working really well together" with her middle school feeder teacher as a cornerstone of her recruiting success.

Recruiting Letters

Participant Five from this study provided a letter to potential students as part of her recruiting documents. The author of this thesis also uses a letter as part of his recruiting efforts, as it is an effective way to communicate the multiple benefits of orchestra participation in high school. Just like teaching technique and musical fundamentals, recruiting is a process that takes place over time and not an event that takes place on a single day. The researcher aims to send out his recruiting letter in November between Fall and Winter concerts; however, a teacher can adjust this timeline to suit their needs. Appendix N contains a sample recruiting letter that

teachers can modify to reflect their program. Some of the themes developed through the data analysis for this study include musical performance, positive relationships, extramusical benefits, scheduling, and program reputation. A recruiting letter allows the high school director to showcase the best aspects of their program and highlight these themes for potential students and their families.

The sample recruiting letter in Appendix N highlights aspects of the orchestra program that appeal to students' basic psychological needs, the desire for extramusical benefits, and addresses scheduling concerns. Noting success at state assessments and performances at state conferences or other competitions appeals to the need for competence. Letting students know that their middle school teacher recommended them for high school orchestra and inviting them in an encouraging way to join shows them the decisions are theirs to make autonomously. The third paragraph highlights the "family" atmosphere of the orchestra, supporting relatedness. Including information about trips, GPA benefits, and the freedom to take orchestra while still participating in other elective or academic courses communicates the external benefits of orchestra participation and the ability to include it in a busy high school schedule.

While there may be a cost associated with printing letters and securing postage, most schools have copy machines for teacher use and can send mail for school purposes at no direct cost to the orchestra program. Securing the addresses of middle school orchestra students can create challenges for the high school director, though there are options for disseminating the letters. If the middle school director is comfortable, they can provide the addresses to the high school director so that the letters can be mailed directly from the high school. Another option is for the high school director to provide the letters in stamped envelopes to the middle school director so they can address and mail them should it not be appropriate to share the addresses.

Finally, should postage or locating the home addresses be a concern, the high school director could provide the letters for middle school teachers to pass out to students in class. This method is not preferred, however, because it is less likely that the parents will see the letter as well.

In addition to a recruiting letter written by the high school director, having current students write congratulatory letters to middle school students for their success, either as a group or individually, can serve as another recruiting tool. The researcher had some of his student leaders write congratulatory letters to the middle school students at his feeder schools who successfully auditioned for their regional orchestra. These types of letters can help build middle school students' confidence in their playing abilities (competence) while showing them that high school orchestra students are friendly (relatedness) and have an active role in their program (autonomy).

Holiday Runout Performances

The code "visibility" occurred frequently in the transcript analysis from the semistructured interviews under the theme of program reputation. The winter holiday season provides
ample opportunities for high school orchestra performances that can increase program visibility
among the broader community and potential orchestra students. Performing holiday music at
local craft markets, shopping centers, and healthcare facilities are a few performance
opportunities that directors might consider. In December, the researcher often takes a group of
his high school students to perform during morning drop-off at the elementary schools in his
feeder pattern. Performing for elementary school students will not immediately impact high
school enrollment. However, it can help build positive relationships with the faculty, families,
and students at the schools, leading to increased support of string programs and a greater

likelihood that students will enroll in middle school and continue participation through high school.

The theme of program reputation in this study also contained the codes "pride" and "reputation." Performing in the community can help develop a sense of pride in current high school orchestra students and boost the program's reputation. The researcher brings a group of students to perform each year at his town's annual holiday craft fair. There is always a large audience of community members, alumni, current middle school students, and town elected officials. The high school orchestra students enjoy a large, supportive crowd, and the program benefits from exposure to many influential people whose support could be helpful should program cuts or budget issues arise.

Morning drop-off performances, visits to local nursing homes, and weekend community performances might require field trip paperwork and buses that could serve as barriers for some programs. Should this be the case, prioritizing one or two events with the most exposure could be an option to ensure the benefits of these types of performances. Should off-campus performances not be an option, a director might approach the administration at the high school to inquire about performing holiday music in the hallway as students arrive on campus for the day. Again, while this might not result in an immediate increase in high school orchestra enrollment, it is a free way to build rapport with school administrators and teachers whose support is essential for successful programs.

Guidance Check-In and Scheduling Emails

Scheduling was a central theme of this study's interviews and document analysis.

Participants intentionally planned recruiting events around the time students chose classes for the following school year. Additionally, the participants displayed a thorough knowledge of their

high school's scheduling framework and what steps students needed to take to ensure they could fit orchestra into their schedules. Based on these findings, this study recommends that the high school director check in with the guidance department in January to see when they will register new students for the next school year. This information can help high school directors plan recruiting events near the time of registration to reinforce the benefits of high school orchestra enrollment. The researcher plans his recruiting tour, discussed in the next section, within one to two weeks of rising ninth-grade registration to answer potential students' questions and equip them with the scheduling knowledge needed to fit orchestra into their freshman schedule.

In addition to checking in with guidance, another recommendation is that high school directors email scheduling information to parents of potential students, either directly or through middle school teachers, around the time of registration. Participant Four provided a recruiting document with a scheduling framework for potential students that outlined four years of a potential high school schedule for students involved in orchestra and other performing arts. The document offered options for summer courses and an order of classes that ensured students could fulfill all of their high school graduation requirements. Even if not providing a four-year framework, letting parents and students know the course numbers for orchestra and whether or not each ensemble requires an audition can prove helpful as families navigate the transition to high school. In this scheduling email, the researcher also includes another reminder about the benefits of orchestra, such as honors credit, high-performing ensembles, trips, and strong peer relationships.

Recruiting Tour

A recruiting tour can effectively communicate many of the benefits of high school orchestra enrollment to potential students. Participant Five from this study spent an entire school

day in February taking her Honors Orchestra to visit her middle school feeders. During this event, she had her students perform for the eighth graders, brought a piece for them to play alongside her students, and showed them a slideshow highlighting their major performances, accomplishments, and trips. She additionally communicated the difference between her orchestra classes in terms of ability and schedule, helping answer student questions about her school and program. Playing for and with students effectively communicates how a high school program can meet a student's competence needs. Getting the opportunity to ask questions to a high school director and rehearse with high school students can aid middle school students in meeting their psychological need for relatedness. Witnessing how high school students advocate for their program can communicate to potential students that those in the program want to be there and have a voice to positively influence the organization's direction, meeting their need for autonomy.

A recruiting tour such as the one described by Participant Five can benefit a program, though challenges may make such an event difficult for teachers in certain situations. First, the trip described above would require administrative approval for teacher leave and students to miss school. Teachers without supportive administrators may struggle to schedule such events.

Second, bus and fuel costs are continually rising. The researcher recently took his students on a recruiting tour this past January and spent \$1700 on a bus for the day. Without financial assistance from class fees, fundraising, a booster club, or the school, the cost of a recruiting trip could put it out of reach for some teachers. Finally, the middle school teachers must recognize the importance of the recruiting event and be willing to give up a day of instruction for the high school students and their teacher to visit. The researcher's feeders not only agree to let him visit for a recruiting tour, but they also combine their two eighth-grade classes into a single period to

avoid him having to make two stops in one day. High school teachers without cooperative and supportive middle school feeders would struggle to implement a recruiting tour. Despite the potential challenges, the benefits of recruiting tours make them worth the time, effort, and financial costs if a high school teacher has sufficient support and resources for the event.

High Schooler for a Day

Inviting middle school orchestra students to the high school to become "high schoolers for a day" can serve as a recruiting activity for the high school director while directly benefitting middle school programs. This activity could take many forms to meet the needs of different programs. The researcher recently invited two of his middle school feeders to bring their students to the high school for an assessment preparation workshop during the school day. The middle school teachers bused students to the high school, and they spent a few hours rehearing their state assessment music with the researcher, performing alongside his students, and eating lunch in the orchestra room with high school orchestra parents and students. Hearing a new perspective on their concert music and receiving suggestions for improvement served to meet the students' need for competence. Working closely with the high school director and his students conveyed that the high school orchestra would meet the middle school students' need for relatedness. The middle school teachers appreciated hearing their students off the podium and receiving the researcher's suggestions for the last few weeks of preparation before the assessment. Four middle school students who had already registered for high school classes and did *not* initially sign up for orchestra reached out after the workshop, inquiring if they could still join for the next school year.

The high schooler for a day event could also take the form of a technique workshop, collaborative spring concert rehearsal, or alternative styles day to best meet the needs of a

particular group of students and teachers. Like the recruiting tour described above, this option would require substantial administrative, financial, and parental support. Finding a date that works for both programs can prove challenging as well. As mentioned for the recruiting tour, though, the potential benefits of the high schooler for a day recruiting option outweigh the costs if the support systems are in place to make the event possible.

Switch Days

Participants One, Three, and Four identified switch days as integral to their recruiting efforts. Some participants visited the middle schools to assist their directors, while others switched schools for an entire day – the high school director teaching all day at the middle school while the middle school director went to the high school. There is no set time of year when switch days must occur, but the researcher recommends the time between state assessment and spring concerts where the activity would be least disruptive to regular classroom routines and performance preparation. By switching schools for a day, high school students would enjoy working with a former teacher, and middle school students would have the chance to build positive relationships with the high school director. The need for competency would be satisfied in both groups of students by receiving instruction and performance advice from someone new. While a switch day has no financial cost, it would require support from administrators at both schools and a positive, collaborative relationship between the middle and high school directors.

Spring Collaborations

Participants Two, Four, and Five highlighted collaborative performances between middle and high school students in their discussions of recruiting strategies. Participant Five recalled asking her current freshman about a joint performance at one of the high school's concerts the prior year, where they performed a song by the band Journey together, and they described it as

"the best thing ever." Participant Two did not have students perform together but invited rising freshmen to her Spring concert to watch the high school students perform. Whether directors invite students to perform together or attend each other's performances, such opportunities can showcase the competence and relatedness aspects of high school orchestra participation.

The researcher would recommend that high school directors invite eighth graders to perform with high school students to allow them to work together as teachers and students instead of merely observing a performance. However, doing so requires more planning regarding the rehearsal schedule and concert logistics. If both programs have large numbers of students, directors must ensure they have enough stage space to fit all students or decide how they will pare down the ensemble to facilitate a performance. Choosing the correct repertoire is the most significant challenge to a joint performance between middle and high school students. Not only does the piece need to appeal to both groups of students, but the difficulty level must be such that it is not too difficult for middle school students. If the repertoire is too challenging and the middle school students become frustrated, the experience can serve as one that thwarts their psychological need for competence.

Placements Email / Year Ahead Highlights

After high school teachers complete their rosters and ensemble placements for the following school year, they email them to potential middle school students and their parents. This activity can serve as the final recruiting activity of a school year before summer break. Appendix O contains a sample email. Sending final rosters to prospective students can aid in correcting any errors in name or instrumentation and also allow an additional opportunity for students who did not initially sign up for orchestra to change their minds. The researcher has successfully used this method to add a student or two to his rosters each year. Parents often

spend substantial time, money, and energy supporting their child's participation in school orchestras. When they see a roster without their child's name included, they might let go of any reservations concerning continued participation in high school and encourage their child to continue formal study. While this recruiting activity might not result in substantial changes in overall high school orchestra enrollment, it is worth the extra effort, as there is no financial cost, and the time commitment for middle and high school teachers is minimal.

Summary

This applied research study sought to improve the high school orchestra recruiting practice using basic psychological needs theory. Effective recruiting is vital for high school orchestra teachers to maintain job security and build successful programs. This chapter outlined a framework and timeline for high school orchestra recruiting activities derived from the literature review, findings from three data collection methods, and the researcher's lived experience as a high school orchestra director. The recommendations provide resources that high school teachers can use to appeal to potential students' needs for competence, relatedness, and autonomy while also addressing scheduling concerns and the desire for extramusical benefits from orchestra participation. While directors may not have the time or means to implement all of the recommendations provided here, they can serve as a starting point for developing a recruitment process that best meets the needs of their school, students, and community.

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Appendix A: Doctoral Thesis Proposal Approval

DOCTORAL THESIS PROPOSAL DECISION

The thesis advisor has rendered the following decision concerning the proposal status for Ryan Silvestri

on the research topic title of

The Role of Basic Psychological Needs Theory in the

		·						
	Recruiting of Ninth-Grade O	rchestra Students						
	as submitted on Septe	ember 18, 2023:						
a.	Full Approval to proceed with no proposal revisions. The student may fully engage the research and writing process according to the established the timeline. Upon full approval, the student may apply for IRB approval, if applicable (see STEP 4 concerning IRB approval process).							
b.	Provisional Approval to proceed with proposal pending cited revisions. (This is the most common decision). The student must resubmit the proposal with cited revisions according to the established timeline. The Advisor will indicate the committee's status on your response to the required revisions. The student may NOT apply for IRB approval until full approval is granted.							
c.	Redirection of Proposal. develop a new proposal, as minor revision research project. The student may NOT	ons will not meet the ex	spectations for the					
Dr. B	rian D. Stiffler		9/18/2023					
Print	Name of Advisor/Mentor	Signature	Date					
Dr. H	anna J. Byrd		9/18/2023					
Print	Name of Reader	Signature	Date					

Appendix B: Liberty University Institutional Review Board Permission Letter

LIBERTY UNIVERSITY. INSTITUTIONAL REVIEW BOARD

January 23, 2024

Ryan Silvestri Brian Stiffler

Re: IRB Exemption - IRB-FY23-24-823 Recommendations for Improving the Recruitment of High School Orchestra Students Using Basic Psychological Needs Theory

Dear Ryan Silvestri, Brian Stiffler,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or

For a PDF of your exemption letter, click on your study number in the My Studies card on your Cayuse dashboard. Next, click the Submissions bar beside the Study Details bar on the Study details page. Finally, click Initial under Submission Type and choose the Letters tab toward the bottom of the Submission Details page. Your information sheet and final versions of your study documents can also be found on the same page under the Attachments tab.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, PhD, CIP
Administrative Chair
Research Ethics Office

Appendix C: Approval of "School Orchestra and String Teachers" Post

1/28/24, 10:05 PM Mail - Silvestri, Ryan Michael - Outlook [External] Re: SOST Permission to Post Request Barnes, Gail Sat 1/27/2024 3:03 P To:Silvestri, Ryan Michae [EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.] Ryan, Thanks for making this request. We did approve this post. Gail On Jan 23, 2024, at 6:51 PM, Silvestri, Ryan Michael <rmsilvestri@liberty.edu> wrote: January 23, 2024 Dr. Gail Barnes Administrator "School Orchestra and String Teachers" Facebook Group Dear Dr. Barnes, As a graduate student in the School of Music at Liberty University, I am conducting research as part of the requirements for a Doctor of Music Education degree. The title of my research project is "Recommendations for Improving the Recruitment of High School Orchestra Students Using Basic Psychological Needs Theory." The purpose of my research is to provide recommendations for improving the practice of recruiting high school orchestra students. I am writing to request your permission to create a post in your Facebook Group, "School Orchestra and String Teachers," to recruit Participants will be asked to complete an anonymous survey (https://forms.office.com/r/VRuRhPifSU), Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time. Thank you for considering my request. If you choose to grant permission, respond by email to letter document is attached for your convenience. Sincerely,

Ryan Silvestri Doctoral Candidate, Liberty University

<Permission-Response_Survey_Dr.Barnes.docx>

Appendix D: Survey Participant Recruitment Facebook Posts

Personal Facebook page post:

ATTENTION FACEBOOK FRIENDS: I am conducting research as part of the requirements for a doctor of music education degree at Liberty University. The purpose of my research is to help improve the practice of recruiting high school orchestra students. To participate, you must be a teacher who teaches at least one elective high school orchestra class. Participants will be asked to complete an anonymous online survey, which should take about 15 minutes. If you would like to participate and meet the study criteria, please click the link provided at the end of this post. An information sheet is linked on the first page of the survey. Please review the document, and if you agree to participate, answer the question in section 1 and proceed to section 2. Please feel free to share this post with any of your colleagues who might be interested in completing the survey as well. Thank you!

Survey Link: https://forms.office.com/r/VRuRhPifSU

Post on the School Orchestra and String Teachers group on Facebook:

My name is Ryan Silvestri, and I am a high school orchestra teacher in South Carolina and a doctoral student in music education at Liberty University. I am conducting research as part of the requirements for my degree. The purpose of my research is to help improve the practice of recruiting high school orchestra students. To participate, you must be a teacher who teaches at least one elective high school orchestra class. Participants will be asked to complete an anonymous online survey, which should take about 15 minutes. If you would like to participate and meet the study criteria, please click the link provided at the end of this post. An information sheet is linked on the first page of the survey. Please review the document, and if you agree to participate, answer the question in section 1 and proceed to section 2. Please feel free to share this post with any of your colleagues who might be interested in completing the survey as well. Thank you!

Survey Link: https://forms.office.com/r/VRuRhPifSU

Appendix E: Survey Participant Recruitment Emails

Dear String Educator,

As a doctoral candidate in the School of Music at Liberty University, I am conducting research as part of the requirements for a degree in music education. The purpose of my research is to help improve the practice of recruiting high school orchestra students, and I am writing to invite you to join my study.

Participants must be teachers who currently teach at least one elective high school orchestra class. Participants will be asked to take an anonymous online survey that will take approximately fifteen minutes to complete. Participation will be completely anonymous, and no personal, identifying information will be collected.

To participate, please click here (https://forms.office.com/r/VRuRhPifSU) to complete the study survey.

An information sheet is provided at the beginning of the survey. The information sheet contains additional information about my research.

Sincerely,

Ryan Silvestri Doctoral Candidate, Liberty University rmsilvestri@liberty.edu

Appendix F: Interview and Document Collection Participant Recruitment Email

Dear String Educator,

As a doctoral candidate in the School of Music at Liberty University, I am conducting research as part of the requirements for a degree in music education. The purpose of my research is to help improve the practice of recruiting high school orchestra students, and I am writing to invite you to join my study.

Participants must be teachers who currently teach at least one elective high school orchestra class. Participants will be asked to participate in an online audio- and video-recorded interview that will take approximately 30 minutes to complete and submit any documents used in the recruitment of new orchestra students. The submission of documents should take approximately 30 minutes to complete as well, and should be completed within one week of the interview's conclusion. Names and other identifying information will be requested as part of this study, but participant identities will not be disclosed and documents will be redacted to remove any information that could identify the participant or their institution.

To participate, please contact me via email at to schedule an interview.

An information sheet is attached to this email. The information sheet contains additional information about my research.

Sincerely,

Ryan Silvestri Doctoral Candidate, Liberty University

Appendix G: Psychological Needs Questionnaire from Survey

Please read each item carefully and indicate how true it is for your recruiting methods, potential students, and teaching situation.

Use the following scale to respond:

1 2 3 4 5 6 7

not at all true somewhat true very true

- 1. My recruiting strategies show potential students ways they can have a voice in the orchestra program.
- 2. My recruiting strategies communicate that potential students will develop strong friendships with the other students in orchestra.
- 3. My recruiting methods highlight the musical skill of my high school ensembles.
- 4. I pressure students to join orchestra in high school.
- 5. My recruiting efforts reinforce the musical abilities of my potential students.
- 6. My recruiting efforts convey that I have a positive relationship with my students.
- 7. Students are deterred from joining my program because my high school ensembles do not perform at a high level.
- 8. I communicate to potential students that I value their opinions and ideas concerning the orchestra.
- 9. My recruiting efforts highlight the friendships that students will develop in high school orchestra.
- 10. My recruiting efforts introduce students to how the technical and musical skills developed in high school will help them improve as musicians.
- 11. My recruiting methods convey to students that I make most of the program decisions.

- 12. My recruiting methods convey my students like me as a teacher.
- 13. My recruiting efforts highlight the sense of accomplishment students feel from their participation in orchestra.
- 14. My recruiting efforts demonstrate that I care about my students.
- 15. My recruiting efforts communicate the opportunities students will have to perform and demonstrate their skills in high school.
- 16. My potential students worry about making friends in high school orchestra.
- 17. Students want to join my program because they feel it is a place where they can be themselves.
- 18. Students choose not to join my program because they do not like me as a teacher.
- 19. Students choose not to join orchestra in high school because they do not feel competent in their musical abilities.
- 20. I explain to potential students why we include technical exercises in our regular class routines.
- 21. Students join my program because of my positive reputation as a teacher.

Autonomy (1, 4 (R), 8, 11 (R), 14, 17, 20)

Competence (3, 5, 7 (R), 10, 13, 15, 19 (R))

Relatedness (2, 6, 9, 12, 16 (R), 18 (R), 21)

Questions marked with an "R" were worded negatively and thus rescored by subtracting the participant's indicated score from eight.

Appendix H: One-Way ANOVA – Degree and Psychological Needs Questions

		Sum of Squares	df	Mean Square	F	Sig.
4: I pressure students to join (R)	Between Groups	16.298	3	5.433	3.252	.031
	Within Groups	70.158	42	1.670		
	Total	86.457	45			
5: Reinforce Musical Abilities	Between Groups	24.284	3	8.095	5.683	.002
	Within Groups	59.825	42	1.424		
	Total	84.109	45			

Appendix I: Tukey HSD for Degree ANOVA

			Mean		95% Con Inter		
Dependent Variable	(I) Degree	(J) Degree	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
I pressure students to join (R)	Bachelor	Master	.908	.425	.159	23	2.05
		Doctor	1.733	.667	.060	05	3.52
		Other	467	.973	.963	-3.07	2.14
	Master	Bachelor	908	.425	.159	-2.05	.23
		Doctor	.825	.635	.569	87	2.52
		Other	-1.375	.951	.479	-3.92	1.17
	Doctor	Bachelor	-1.733	.667	.060	-3.52	.05
		Master	825	.635	.569	-2.52	.87
		Other	-2.200	1.081	.192	-5.09	.69
	Other	Bachelor	.467	.973	.963	-2.14	3.07
		Master	1.375	.951	.479	-1.17	3.92
		Doctor	2.200	1.081	.192	69	5.09
Reinforce Musical	Bachelor	Master	.125	.393	.989	93	1.18
Abilities		Doctor	2.400^{*}	.616	.002	.75	4.05
		Other	.000	.898	1.000	-2.40	2.40
	Master	Bachelor	125	.393	.989	-1.18	.93
		Doctor	2.275^{*}	.587	.002	.71	3.84
		Other	125	.878	.999	-2.47	2.22
	Doctor	Bachelor	-2.400 [*]	.616	.002	-4.05	75
		Master	-2.275*	.587	.002	-3.84	71
		Other	-2.400	.999	.092	-5.07	.27
	Other	Bachelor	.000	.898	1.000	-2.40	2.40
		Master	.125	.878	.999	-2.22	2.47
		Doctor	2.400	.999	.092	27	5.07

 $[\]ast$. The mean difference is significant at the 0.05 level.

Appendix J: One-way ANOVA – Certification and Psychological Needs Questions

		Sum of Squares	df	Mean Square	F	Sig.
7: Students Deterred by low HS Level (R)	Between Groups	10.802	3	3.601	2.947	.044
	Within Groups	51.307	42	1.222		
	Total	62.109	45			
10: Introduce Technical and Musical Skills	Between Groups	14.588	3	4.863	3.122	.036
Development	Within Groups	65.412	42	1.557		
	Total	80.000	45			
20: Explain Technical Exercises	Between Groups	35.349	3	11.783	3.145	.035
	Within Groups	157.368	42	3.747		
	Total	192.717	45			

Appendix K: Tukey HSD for Certification ANOVA

						95% Confidence Interval	
Dependent Variable	(I) Certification	(J) Certification	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Students Deterred by	Bachelor	Master	193	.663	.991	-1.97	1.58
low HS Level (R)		Alt	1.807^*	.663	.044	.03	3.58
		Other	.974	.802	.621	-1.17	3.12
	Master	Bachelor	.193	.663	.991	-1.58	1.97
		Alt	2.000	.902	.135	41	4.41
		Other	1.167	1.009	.657	-1.53	3.87
	Alt	Bachelor	-1.807*	.663	.044	-3.58	03
		Master	-2.000	.902	.135	-4.41	.41
		Other	833	1.009	.842	-3.53	1.87
	Other	Bachelor	974	.802	.621	-3.12	1.17
		Master	-1.167	1.009	.657	-3.87	1.53
		Alt	.833	1.009	.842	-1.87	3.53
Introduce Technical	Bachelor	Master	-1.772	.748	.099	-3.77	.23
and Musical Skills Development		Alt	772	.748	.732	-2.77	1.23
Bevelopment		Other	1.395	.905	.423	-1.03	3.82
	Master	Bachelor	1.772	.748	.099	23	3.77
		Alt	1.000	1.019	.761	-1.73	3.73
		Other	3.167^{*}	1.139	.039	.12	6.21
	Alt	Bachelor	.772	.748	.732	-1.23	2.77
		Master	-1.000	1.019	.761	-3.73	1.73
		Other	2.167	1.139	.243	88	5.21
	Other	Bachelor	-1.395	.905	.423	-3.82	1.03
		Master	-3.167*	1.139	.039	-6.21	12
		Alt	-2.167	1.139	.243	-5.21	.88
	Bachelor	Master	-2.763	1.161	.097	-5.87	.34

Explain Technical		Alt	-1.763	1.161	.436	-4.87	1.34
Exercises		Other	-2.263	1.404	.383	-6.02	1.49
	Master	Bachelor	2.763	1.161	.097	34	5.87
		Alt	1.000	1.580	.921	-3.23	5.23
		Other	.500	1.767	.992	-4.23	5.23
	Alt	Bachelor	1.763	1.161	.436	-1.34	4.87
		Master	-1.000	1.580	.921	-5.23	3.23
		Other	500	1.767	.992	-5.23	4.23
	Other	Bachelor	2.263	1.404	.383	-1.49	6.02
		Master	500	1.767	.992	-5.23	4.23
		Alt	.500	1.767	.992	-4.23	5.23

^{*.} The mean difference is significant at the 0.05 level.

Appendix L: One-way ANOVA – School Type and Psychological Needs Questions

		Sum of Squares	df	Mean Square	F	Sig.
7: Students Deterred by low HS Level (R)	Between Groups	30.698	2	15.349	21.012	<.001
	Within Groups	31.411	43	.730		
	Total	62.109	45			
19: Potential Students Lack Confidence In Their Musical Abilities (R)	Between Groups	26.795	2	13.398	6.220	.004
	Within Groups	92.618	43	2.154		
	Total	119.413	45			

Appendix M: Tukey HSD for School Type ANOVA

			Mean			95% Confide	Confidence Interval	
Dependent Variable	(I) School Type	(J) School Type	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound	
Students Deterred by low HS Level (R)	Public	Private	4.012*	.619	<.001	2.51	5.51	
		Charter	.179	.511	.935	-1.06	1.42	
	Private	Public	-4.012*	.619	<.001	-5.51	-2.51	
		Charter	-3.833*	.780	<.001	-5.73	-1.94	
	Charter	Public	179	.511	.935	-1.42	1.06	
		Private	3.833*	.780	<.001	1.94	5.73	
Potential Students	Public	Private	2.415	1.063	.071	17	4.99	
Lack Confidence In Their Musical		Charter	-2.252*	.878	.036	-4.38	12	
Abilities (R)	Private	Public	-2.415	1.063	.071	-4.99	.17	
		Charter	-4.667*	1.340	.003	-7.92	-1.41	
	Charter	Public	2.252^{*}	.878	.036	.12	4.38	
		Private	4.667*	1.340	.003	1.41	7.92	

st. The mean difference is significant at the 0.05 level.

Appendix N: Recruiting Letter Template

Dear 8 th Grade Orchestra Parents and Students:	
Hello! My name is, and I am the Director of Orchestras at I am writing because your orchestra teacher recommended you to join the Orchestra program next year! Although it is only November, it will soon be time to start making decisions about classes and activities for the transition to high school, and I would like to tell you a little about our award-winning orchestra and high school here at	
TheOrchestra program is the largest high school orchestra program in We offer three orchestra classes during the school day – Concert, Chamber, and Honors. ALL students receive Honors Credit for participating in orchestra, which means that they can earn up to a <u>5.0</u> toward their GPA calculation <i>in addition</i> to receiving their <u>Fine Arts Credit!</u> The orchestras have consistently earned superior ratings at state assessment, performed our state conference, and competed nationally in the American String Teacher's Association National Orchestra Festival. In addition, members of the Orchestra enjoy the opportunity to travel and perform across the country. Our recent trips have included 6 Flags Ov Georgia, Universal Studios, Nashville, Disney, Washington DC, and Williamsburg/Busch Gardens.	
The transition to high school can be challenging, but our orchestra is a family and an excellent way for new students to find a home base from which they can grow musically and socially. Being a part of the orchestra requires minimal after-school commitment, meaning that our students are still free to participate in sports, clubs, and other electives. Many of our student apply to be a part of the prestigious AP Academy, where they can earn an Advanced Studies Diploma. Our state-of-the-art Center for Advanced Studies offers students many additional opportunities in biomedical science, healthcare, cosmetology, horticulture, engineering, automotive tech, photography, and more. We also have many student-athletes in the orchestra (football, tennis, soccer, baseball, golf, etc.) who can fulfill all their sports commitments while still performing with the orchestra. Being such a large school means there are opportunities for <i>every</i> student to explore and learn in an environment that is right for them.	
I am very excited to work with the rising 9 th graders as they transition to high school, ar I look forward to meeting them during our Spring recruitment trip. I hope you and your student will strongly consider becoming a part of our tradition of excellence here in the Orchestra program. If you have questions or want to know more about our program or high school, <i>please do not hesitate to call or e-mail me</i> – I am here to help!	
Best, ***Hand Sign Here*** Type Name High School Orchestra E-Mail Phone Number/Website	

Appendix O: Placements Email Example

Amazing middle school teachers - please forward this to your 8th-grade parents/students!

Good afternoon!

While this year is about to come to a close, we are already busy planning for another *AWESOME* year in the ______ Orchestra! Attached are our current class placements for next year. These were developed using a combination of class registration, intent forms, and auditions.

IMPORTANT - If you have a rising 9th grader coming to _____ who wants to be in the orchestra, but you do *NOT* see them on the roster, please let me know ASAP!

It is not too late for them to join, and we would love to have them next year!

Additionally, if you see any errors (wrong instrument listed, etc.) or your child has accepted a spot at a different school, please let me know so I can update my records.

I will be in touch in early August with more details for next year, but if you have any questions or concerns in the meantime, please do not hesitate to reach out!

Have a wonderful summer,

Name and Contact Information