

**STUDENT MUSICAL EXPERIENCES AND SELF-EFFICACY
IN AP MUSIC THEORY**

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Nathan M. Patton
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Thesis Approvals:

Dr. Elizabeth Parker, Thesis Advisor, Music Education
Dr. Nathan Buonviri, Music Education
Dr. Deborah Confredo, Music Education

ABSTRACT

The purpose of this case study was to examine musical experiences which may affect student perceptions of self-efficacy in Advanced Placement (AP) Music Theory. Four students from a single AP Music Theory class participated in interviews where they discussed experiences in high school music study. Interview topics included ensemble participation in high school, outside-school involvement in musical activities and study, and perceptions of success in the course and preparation for the AP Music Theory examination.

Specific research questions addressed in the study were: (1) What course skills addressed in AP Music Theory do students from different musical backgrounds feel most prepared to demonstrate within the context of the AP Music Theory examination? (2) What do student participants from different musical backgrounds cite as specific challenges in AP Music Theory? (3) How do students perceive their own musical backgrounds in relationship to their perceived success in AP Music Theory?

Findings suggested that prior musical experiences and a positive, low-stress classroom atmosphere contributed to participants' confidence completing fundamental performance tasks in AP Music Theory, and that those influences affected participants' feelings of self-efficacy in the class and on the AP Music Theory examination. Conversely, participants' application of prior knowledge and previously developed musical skills to more difficult AP-style performance tasks solicited feelings of self-doubt and lower levels of self-efficacy. Implications of this study suggest that teachers of school music ensembles, applied lessons, and AP Music Theory should consider student self-efficacy when designing instruction and planning rehearsals or lessons. Researchers

might consider measuring student feelings of self-efficacy in specific performance tasks, and the ways in which teachers can help students to develop self-efficacy in music classes.

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CHAPTER 1

BACKGROUND AND REVIEW OF LITERATURE

Introduction

My first exposure to Advanced Placement (AP) Music Theory was as a student in high school. I chose to take the course in my junior year, though at the time I had no idea I would look back to see my decision as a key moment that shaped my future as a musician and an educator. Fast-forward to 2019: I began the second phase of my music teaching career with a new job at Warwick Junior/Senior High School¹, where the principal hired me to teach choir in grades seven to 12, seventh grade general music, and a course called Advanced Music. Before the year started, however, I was informed by my administration that they removed Advanced Music from my schedule because only two students had registered. My principal instead suggested I use the extra planning time to consider filling the space with AP Music Theory, a new course for our school.

More than 15,000 students enroll each year in AP Music Theory, an introductory college-level theory class taught at high schools across the United States and around the world (College Board, 2023). The course aims to expand students' understanding of music theory principles and processes, while developing critical musicianship skills, such as listening, sight-singing, dictation, and aural skills (College Board, 2020). Though the AP Music Theory examination is standardized, there is no single established textbook or curriculum. It falls to individual teachers of AP Theory to design their own sequence of instruction to prepare students for the exam. Since developing the course at Warwick for students in grades 10-12, I have taught three iterations of the class and have had three

¹ All names have been changed to pseudonyms to protect participant anonymity.

very different experiences. Due to the COVID-19 pandemic, we began the 2020-2021 school year in a hybrid model – I saw half my students in person on Monday and Tuesday and the other half on Thursday and Friday. Additionally, some students enrolled as virtual-only participants. Students were required to attend virtually when not in person; however, this system of teaching and learning did not lend itself well to practicing aural skills as a group or reviewing and testing for the AP examination. During that school year, our school waived the testing requirement for AP classes due to the continuing challenges of COVID-19 and several students chose not to take the AP Music theory exam. Though students returned to in-person instruction in the 2021-2022 school year, I experienced my own challenges in instructing a larger class of 12 seniors, especially after a year of what felt like “lost” music instruction. While these students were all eligible to take the course, as they had met the prerequisites, they demonstrated a larger range of musical ability and willingness to accept academic challenges. This year, 2022-2023, my AP Theory class comprises a small mixed group of five students who prepare daily in class for their exam in mid-May.

Because AP Music Theory is the only music theory course in my school, and the only course with an associated and required standardized test, I spend a great deal of my planning and preparation time focusing on ways for students to be successful. AP Music Theory also presents an interesting challenge as a course which shifts its focus often, moving between learning a highly academic knowledge-based course of study, and developing musicianship and musical skills needed for success in the class and on the exam. To better understand the challenges that my own students face, and to contribute to

the research on AP Music Theory, I chose AP Theory as the focus of several research projects throughout my graduate coursework, most recently in Spring of 2022.

Pilot Study

I conducted a pilot study in Spring 2022, which examined links between students' unique in-school and out-of-school musical experiences with AP Music Theory. The study was a single within-site case study focusing on individual student perceptions and experiences in one AP Music Theory class. Participants for the study included four past members of an AP Music Theory class, all college freshmen over the age of 18. Participants were selected using purposeful sampling and chosen based on availability and willingness to participate. All participants were former students whose primary high school music experiences fell into the categories of choir, band, orchestra, or outside-school music experiences, including private study and informal music practice and performance. The study took place over one semester. Following initial recruitment, each participant took part in an individual interview lasting 30-45 minutes on Zoom. After individual interviews, three of the four participants engaged in a one-hour focus group while the fourth participant interviewed individually a second time. I recorded interviews and transcribed audio recordings for coding and analysis.

From this study, several themes emerged among participant responses, including (a) connections to school and outside ensembles, (b) atmosphere for learning, and (c) student perceptions of success and preparation. Participant responses illuminated connections between ensemble participation and success in AP Music Theory; students with prior experience in band, chorus, and orchestra experienced less stress and found AP Music Theory topics to be easier to comprehend and master. Those with ensemble

experiences described their capacity to transfer knowledge and skills from AP Music Theory back to their ensemble participation. Participants also shared how a positive and welcoming classroom atmosphere contributed to their learning. Additional themes addressed by participants included preparation for the class and exam, and individual explanations for why they chose or did not choose to take the AP Exam. Based on the pilot study data, it seemed as though there were more data to uncover about individuals' experiences. Specifically, that participants often referred to their own self-confidence or self-doubt alongside their achievement in AP Music Theory. Thus, I went searching for a phenomenon that might help to investigate these experiences. I reviewed literature surrounding student motivation and confidence and found studies linking musical performance and student achievement to self-efficacy. For this inquiry, I decided to shift the focus away from differences in student experiences with band, choir, and orchestra backgrounds, and instead examine all student experiences through a self-efficacy lens. This new study aims to expand upon the pilot study by examining musical experiences and influences of student feelings of self-efficacy in one AP Music Theory class.

Study Rationale

The AP Music Theory course offers students in high school the opportunity to explore and study music in ways that enhance their understanding gained from participation in traditional school performing ensembles. By studying music with a more focused analytical approach, students have an opportunity to delve more deeply into complex musical concepts in ways that band, choir, and orchestra may not—focusing on tasks like harmonic analysis, dictation, sight-singing, and aural identification, rather than interpretation and ensemble performance. There is little research surrounding student

feelings of self-efficacy in AP Music Theory classes in high school, though scholars have studied strategies for developing the aural skills necessary for success in AP Theory (Buonviri, 2018; Buonviri & Paney, 2015; Killian & Henry, 2005; Sabella & Haning, 2020). Interviewing former AP Music Theory students may help to illuminate factors that students view as contributing to perceived success and increased self-efficacy in AP Music Theory.

Self-Efficacy

Albert Bandura (1986) introduced the concept of self-efficacy within the development of his larger social cognitive theory. He defined a person's self-efficacy as a belief in one's ability to carry out the actions necessary in the process of achieving a goal or outcome (Bandura, 1997). Though Bandura (1986, 1997) conceived of self-efficacy broadly in the human experience, self-efficacy may also be confined to situational or task-specific contexts, and so may be specifically applied to students' approaches to academic challenges and coursework. Because self-efficacy affects an individual's levels of effort, persistence, and resilience (Pajares, 1996), one could propose that a student who experiences high levels of general self-efficacy will approach difficulties within their coursework with increased effort, and a greater drive to perform well despite the challenges. Within musical contexts, individuals experiencing high levels of self-efficacy more easily accommodate challenges and difficulties when completing performance tasks, while individuals with low self-efficacy beliefs might choose to avoid challenging performance tasks (Afacan & Kaya, 2022).

When determining the sources of self-efficacy, Bandura (1997) identified four areas of concern: *enactive mastery experience*, *vicarious experience*, *verbal persuasion*,

and *physiological and affective states*. He proposed that enactive mastery experience represents the most influential source of efficacy. When people see their own performance completing tasks as either successes or failures, their perceived success or failure can have either a positive or negative effect on their overall feelings of self-efficacy. Additionally, vicarious experience, or experiences with others, contribute to individual feelings of self-efficacy. Observing outcomes modeled by others and comparing to oneself, or self-appraisal, is a method of developing one's own capabilities and enhancing efficacy beliefs (Bandura, 1997). Verbal persuasion occurs when another person expresses a belief in one's abilities, which can then boost feelings of self-efficacy. This often requires that the observer possesses some higher level of competence than the person whose efficacy is in question (Bandura, 1997), as is the case in schools, where students might look to affirmations by the teacher or other peers who are viewed as higher achievers. Lastly, physiological states, like physical strength and stamina, can help individuals cope with stressors (Bandura, 1997). AP Music Theory reflects a high stakes environment as students learn and test new skills on a standardized exam. Indeed, students' perspectives on the presence or absence of stressors and other physiological responses may give insight into growing self-efficacy in AP Music Theory.

It is important to note that a student's choice to enroll in AP Music Theory may not be based on prior music experience and might be influenced by extra-musical factors, such as potential stress or competition among peers (Kowalski & Christiansen, 2019). These stressors may present physiological responses leading to a decrease in self-efficacy and a student's resulting choice to not participate in AP Music Theory at all. McPherson and McCormick (2003, 2006) examined factors that contribute to greater self-efficacy

among young musicians performing music. Using structural equation analysis, McPherson and McCormick (2006) modeled paths linking various factors involved in determining self-efficacy. Their findings suggested that self-efficacy theory continues to more consistently predict student achievement than other conceptions, and that teachers should become aware of their students' perceptions of their own personal competence and seek to identify students with low self-efficacy in an attempt to strengthen their beliefs in specific areas (McPherson & McCormick, 2006). Hendricks and Smith (2018) identified themes affecting adolescent musical confidence and motivation to perform in various styles and their connection to positive social experiences while music making. They noted the importance of communal music-making, but not without appropriate levels of scaffolding to promote successful performances and greater levels of student musical confidence as well. Negative music making experiences were addressed from a perspective of self-efficacy, asserting that students did not have the requisite levels of mastery experience to be able to overcome challenges with performing at the required level (Hendricks & Smith, 2018). Research into student self-efficacy draws parallels with student responses from the pilot of the current study, which reflected varying feelings of self-confidence in the course, and students' rationale for choosing to take the AP Theory Exam or simply participate in the class.

Student Success in AP Music Theory

Prior studies involving facets of the AP Music Theory curriculum and aural skills development among high school students have highlighted the effect of ensemble participation and outside-school participation on AP Music Theory success (Buonviri & Paney, 2015; Killian & Henry, 2005; Sabella & Haning, 2020). Studies concerning

factors that affect success in aural skills assessments suggest that students with both choir and band experience might score higher than those participating in only one ensemble (Sabella & Haning, 2020). Among choir students, varied musical experiences—private lessons, school ensembles, and/or outside school experiences—did not significantly impact sight-singing outcomes, rather all but the lowest-scoring students benefitted more from a 30-second preparation time and used strategies like singing out loud and using hand signs to aid with sight-singing success (Killian & Henry, 2005). Buonviri and Paney (2015) also explored teacher perceptions of student success factors in aural skills evaluations, noting differences in how teachers perceived students’ musical backgrounds that they considered strong in dictation ability. Results indicated a need to encourage students to focus during dictation skill development in order to increase confidence and reduce feelings of overwhelm and anxiety (Buonviri & Paney, 2015). Because a significant portion of the AP Music Theory exam relies on students’ aural skills—dictation and sight-singing—understanding challenges and successful teaching and learning strategies is critical in helping students to develop these skills.

Further publications address other factors and challenges surrounding the teaching of AP Music Theory classes. Kleppinger (2017) studied the challenges of assessment in aural skills instruction and pointed to solutions that assisted students in overcoming difficulties during performance assessments, including increased frequency of performance-based assessments and a gradual addition of more complex concepts to dictation practice assessments. Several studies suggest varied approaches that AP Music Theory teachers might engage in to aid student learning. Buonviri (2018) studied one successful AP Music Theory teacher, and found that effective fast pacing, student

rapport, and an active, open learning environment where students received individual support contributed to a highly effective classroom atmosphere for learning. Grey (2021) provided strategies for developing dictation skills with musical literature to improve student understanding of music theory concepts. Kuzmich (2011) highlighted several approaches to enhancing AP Music theory student learning, including engaging in creative projects, using technology as a resource, and differentiating instruction. Combined, these studies support an array of useful strategies for helping students to not only achieve greater success on aural skills assessments, but more importantly to develop skills necessary for improved musicianship and more advanced study.

A final consideration for student success in AP Music Theory is the overall course load with which high school students enroll during the academic year. Milburn (2011) looked at a larger subset of students, specifically those taking multiple AP courses. She noted that a challenge facing AP students was the rigor of their whole course load, especially when taking multiple AP courses, and increased feelings of stress among this group of high-achieving students (Milburn, 2011). In schools where taking many AP classes is a norm for high-achieving students, stress and rigor could have a large effect on reducing students' feelings of self-efficacy when taking AP Music Theory, especially if it is the first time they are studying music as an academic subject outside of a school ensemble. These broad factors, alongside literature on self-efficacy, provide a rationale for the current study of self-efficacy among AP Music Theory students.

Purpose and Research Questions

The purpose of this case study was to examine musical experiences which may affect student perceptions of self-efficacy in Advanced Placement (AP) Music Theory.

The qualitative nature of the study provides rich and nuanced student perspectives. By identifying common themes, challenges, and experiences, this study may provide insight for AP Music Theory teachers to better understand the ways in which students of varying backgrounds and abilities achieve success and feel more self-confident from one class setting, and encourage teachers to pursue that same inquiry with their own classes.

Research questions addressed in the study include: (1) What course skills addressed in AP Music Theory do students from different musical backgrounds feel most prepared to demonstrate within the context of the AP Music Theory Exam? (2) What do student participants from different musical backgrounds cite as specific challenges in AP Music Theory? (3) How do students perceive their own musical backgrounds in relationship to their success in AP Music Theory?

CHAPTER 2

METHOD

This single case study focused on individual perceptions of self-efficacy and musical experiences of the students from a single AP Music Theory class. Stake (1995, 2005) defined instrumental case study as involving a common experience whose unique qualities can provide information applicable to other cases. Because AP Theory students' experiences from one school may apply to students in another case or school, I chose an instrumental case study approach. I bound the case to student participants enrolled in the same AP Music Theory class and analyzed data from all participants together (Creswell & Poth, 2018). I examined the case using self-efficacy as a lens, beginning by first analyzing for a general picture of participants' experiences, and then analyzing their responses alongside Bandura's (1997) four factors affecting self-efficacy: enactive mastery experience, vicarious experience, verbal persuasion, and physiological response.

Participant Selection and Recruitment

Participants in this study included past members of an AP Music Theory class at Warwick High School², all more than 18 years old. I chose a purposeful sample of participants (Patton, 2015) to identify a specific group of individuals with diverse musical backgrounds who completed the AP Music Theory class in the 2021-2022 school year. This group of participants also constituted a convenience sample—I chose my own prior class of students because I was aware of their diverse musical backgrounds and had an established rapport and contact information that would aid recruitment.

² All names, including school name, have been changed to pseudonyms to protect participant anonymity.

After receiving approval from Temple University's Institutional Review Board (see Appendix A), I began by locating student contacts through personal or university email addresses obtained through their school's directory. Of the 13 students enrolled in AP Music Theory 2021-2022, I obtained contact information for and emailed seven students (Appendix B). Of the seven contacted, four students consented to participate. Participants were provided consent forms electronically (Appendix C), and interviews were scheduled via email communications in February.

All four participants were 12th grade students at Warwick High School during the 2021-2022 school year, where they enrolled in my AP Music Theory class. Each participant had some prior musical experiences in choir before taking AP Music Theory. Other musical experiences consisted of band, orchestra, private applied lessons, or other outside school experiences. Pseudonyms for participants in the study include Oliver, Alex, Dan, and Will.

- Oliver is a freshman in college currently majoring in Media Studies, with an intention to add Music Production as a minor. He sang in the choir for all four years of high school and was a member of two other select school vocal groups. He also recorded and published his own songs to various streaming platforms while in high school.
- Alex majors in Biochemistry in her freshman year of college, with little active current participation in music. She was a member of the choir in junior high and high school and participated as an accompanist for the Concert Choir and Chorale. Alex studied piano privately, and played the trumpet in school.

- Dan studies Physics in college while still staying very active in music with theory coursework and performance. He had no in-school music experience following elementary school but studied piano privately beginning at age 5. Dan joined choir in his senior year and participated as a singer and accompanist.
- Will is a college freshman majoring in Mathematics, who is now taking private cello lessons and continues to be an active performer in his university's orchestra. He participated in orchestra and choir throughout high school, focusing on the string bass. Will was also an active member of the Drama Club and select singing ensembles in high school.

Data Collection and Analysis

The data corpus for this study included four semi-structured interviews, followed by member checking via emails exchanged with participants. I conducted individual interviews with participants lasting approximately 45-60 minutes via Zoom. Interviews took place at times convenient for myself and the participants. I avoided conducting interviews in a location where the background might prompt participants to have a reaction to the environment, namely the classroom where their AP Music Theory class took place. Participants all engaged in interviews from their university dormitory rooms.

At the beginning of each interview, I reminded participants that the session would be recorded and that they could choose to withdraw from the study at any time. After affirming their consent, the interview proceeded according to the protocol (Appendix D). In most cases, interview questions began sequentially with participants being asked to briefly describe their high school musical experiences. From that initial prompt, each

interview progressed through questions organically, evolving from participant responses. I noted additional questions and memos in my research journal and returned to certain topics and questions to clarify meaning throughout. I noted several emerging themes during each interview, and later used these notes to inform my analysis and coding.

Audio recordings of interviews were uploaded to Microsoft Word for transcription and then exported. I edited the transcriptions for clarity and replaced all participant names and classmates mentioned in interviews with pseudonyms. Following transcription and editing, I used an online coding software, *Dedoose* (2021), to organize and analyze codes and themes emerging from the interviews. Following individual interviews, I reached-out to participants in late February to schedule a focus group interview. However, due to time constraints and participant availability, I was unable to locate a common time that worked for enough participants to schedule focus group interview. Thus, rather than a final focus group interview, in early March, I corresponded with participants via email with follow-up questions from their initial interviews seeking clarification about initial interview data and emerging themes. In follow-up emails, I confirmed emergent themes with participants and used those responses to inform the evolution of themes from the individual interviews. I also asked participants to review their interview transcripts for accuracy and included specific questions to check on what I analyzed as themes provided during the interview. Participants shared their feedback on my understanding of their responses which I used to ensure I did not misrepresent participant voices in my analysis.

Throughout the process, I engaged in spiral data analysis (Creswell & Poth, 2018), wherein I compiled and stored transcripts electronically for further analysis.

During the interviews, I created written memos to aid with development of codes and connecting interview themes to one another. I used a combination of *a priori* and open coding when analyzing transcripts. I derived *a priori* codes from Bandura's (1997) factors for self-efficacy: enactive mastery experience, vicarious experience, verbal persuasion, and physiological feedback. After *a priori* coding, I open coded remaining data, adding to my initial list. Lastly, I consulted codes established during my 2022 pilot study, and used elaborative coding (Saldaña, 2013) to build on these previous themes in the current study. Prior to member checking and follow-up communication, I enlisted the help of a peer coder with experience in conducting qualitative research in the field of Psychology to add another level of trustworthiness to my analysis. Following the first two coding sessions, I provided my peer coder with my research purpose, questions, and transcripts using Dedoose. The peer coder provided suggestions of additional codes and sub-codes, which I then incorporated to better organize the data.

Trustworthiness

Throughout the study, I used triangulation to increase credibility of my findings by collecting multiple data sources (Frierson-Campbell & Froelich, 2022), including interviews, written responses to questions via email, and notes and memos from my research journal. I engaged in member checking throughout the process, confirming emerging themes and participant response accuracy during interviews. Following completion of all interviews, I sent transcripts to participants via email to check for accuracy and to offer clarification or alteration. The process of peer coding was also helpful to check my own interpretation with another neutral party. For peer coding, I enlisted the help of my spouse; however, she was not present during any interviews, did

not know participants' identities, and was only made aware of the research purpose and questions prior to coding. I chose to enlist her help for this study because of her perspective and experience conducting research in the field of Psychology.

Positionality

Because of my role as both researcher and former teacher of these students in both choir and AP Music Theory classes, I was aware of possible responses that may occur as a result of my relationship with participants. Additionally, because I had an already established rapport with all participants as both AP Theory teacher and as their choir director, I was concerned that interview responses may skew towards what participants expected I wanted to hear—in essence former students attempting to impress or please me as their former teacher and director. Throughout interviews, I repeated and reframed questions to ensure that responses were not limited to former students discussing a class with a teacher, but rather one of researcher and participant. I had an awareness during the study that I had pre-existing knowledge of the participants and their performance in the AP Music Theory course and exam, but did not consult or use any of their class data in this study. Instead, I allowed participants to self-report their exam scores and discuss their feelings about preparation and outcomes.

CHAPTER 3

CASE PROFILE

The bell rings promptly at 10:00 am and a group of seventh grade students make their way through the door, dodging in-and-out of the already bustling hallway. The chorus room at Warwick Junior/Senior High School sits in its own corridor, shared only by a pair of faculty bathrooms and the doors leading backstage. The chorus room has always been a main thoroughfare for students moving from the “old” side of the building to the “new” gym hallway. The clock ticks ever closer to 10:04 am—the start of fourth period—as AP Music Theory students slowly trickle into the room and assume their established seats. Several of the students sit on the music posture chairs that line three rows of carpeted choral risers set up in the middle of the cavernous room. The rest choose to forego the blue plastic chairs in favor of a more comfortable seat lounging back on the wide carpeted platforms.

The room is abuzz with chatter as the teacher enters and walks to the Yamaha Clavinova (“The Clav” to students), where a laptop remains open, flanked by a stack of choral octavos on one side, and a half-full, half-cold mug of coffee on the other. A quick glance around the room and attendance is done with a click of a button on the computer. A full class of 13 students sits dotted across the risers in clumps, all seniors, all preparing for class in their own way. Several already have their AP Theory practice books out and are ready to absorb the topic of the day. Others are engaged in a heated debate about the correct answer to the AP Physics problem on that day’s FRQ (Free Response Question). A few students sit quietly, staring ahead, apparently lost in some deeply profound

thought. The teacher gulps down one last swig of cup number two for the day and begins the AP Theory class.

This study illuminated the experiences of students in a single AP Music Theory class taught at a small, suburban high school in the Northeastern United States. It is the second year this course has been offered, my second year teaching the course, and the second time the course is filled with only seniors. The class meets daily for 41 minutes—from 10:04 to 10:45am—our school’s fourth period, and is sandwiched in my day between two sections of seventh grade general music and two sections of senior high choir.

Theory in our school is taught in the choir room, my room, which is a large space filled with furniture, musical equipment, and technology. Along one side of the room is a row of cabinets containing student folders, theory textbooks, percussion instruments, and a collection of music education books dating back past several of my predecessors. Along the opposite wall is our new technology lab—two rows of workstations with pianos and computers for 12 students and a teacher. The chorus room is also the place where I teach piano and music production. A projector is located at the front of the room, along with a long whiteboard, half blank and the other half with music staves. Posters and trophies of past adjudications, festivals, and performances line the walls and the tops of the cabinets. In the center of the room is a set of seated risers with chairs arranged for choir rehearsal. It is clear from the way students enter the room and interact with each other that many of them consider the space to be almost a second home.

Like the rest of the world, the school has adapted numerous times over the last few years. The very first year the school offered AP Music Theory, students started the

school year in a hybrid learning environment—half attending in person in an alternate day format, always socially distanced, wearing masks, and the other half at home with asynchronous assignments. It was certainly not the way anyone wanted to start the year, but we adapted through new changes and guidelines in what felt like every day. By the fourth marking period that year, all students were back in class together, and the dynamic changed drastically. It was as if a switch had been flipped and their personalities lit up the room. Last year was a second attempt at “normal” with students back in the building trying to keep distanced and masked until sometime during the third marking period where the school lessened social distancing and masking requirements. It was still a chaotic time for the school as a whole, but I was happy to have a full class in front of me every day and the students were glad for it, too.

CHAPTER 4

FINDINGS

The purpose of this study was to examine the effect of prior musical experiences on student perceptions of success and self-efficacy in AP Music Theory. Research questions addressed the specific course skills addressed in the AP Music Theory class and exam that students felt most and least prepared for, as well as students' own perceptions of how their musical background contributed to these feelings. Data analysis revealed three themes consistent among this study's four participants: *prior musical knowledge and understanding*, *development of new skills*, and *atmosphere for learning*.

Prior Musical Knowledge

All participants in the study discussed connections between their own prior musical experiences and their influence on creating foundational knowledge critical for success in AP Music Theory. When drawing connections between past experiences in ensembles or private applied lessons and AP Music Theory coursework, participants referenced aural skills and fundamental music literacy skills—those studied in the first three units of coursework—as the primary AP skills bolstered by their own prior mastery experiences in music.

Each of the four participants had prior experiences performing music and spoke about those experiences when discussing components of the AP Music Theory curriculum that they felt most comfortable studying. Though Oliver described music theory as being some “foreign concept,” he noted that he was very comfortable with analysis tasks:

Choir made me more confident...especially with the written theory because, you know, every day going to choir and reading the notes. Not only that, but also the select ensembles I was very involved in...reading and singing the music. So, I just got used to doing that.

Alex, Dan, and Will all took private piano lessons throughout their time in both elementary and secondary school. Alex participated in instrumental ensembles in school, and sang with the choir in Junior High and Senior High, but identified her piano study as a primary focus. Alex expressed, “I could read music without thinking about it, and that really helped because I felt like some other people who may not have had as much experience reading music seemed to have more trouble with [the class].” Dan, who had not elected to join any school ensembles until 12th grade, cited piano as his main source of musical knowledge up to that point. He also referred to literacy as “giving him an advantage” when taking theory because he could read complicated music quickly and see patterns in written scores. Dan also discussed the ability to hear a melody and “picture it on the piano,” a skill that he thought aided him in successful dictations and aural identification of intervals during analysis. Will, heavily involved in both choir and orchestra in school, in addition to his piano study, credited his confidence approaching AP Theory to the fact that he “had been doing music all [his] life.” He noted his comfort with sight singing, “because I was singing a lot,” and success memorizing the rules for part-writing because they “made sense.”

None of the participants expressed feeling a fear of success in AP Music Theory, primarily citing their past performing experiences. All referred repeatedly to feeling “confident” as a result of the ways that they had engaged in musical performance and study prior to taking the course, but to varying degrees. Participants referenced their own knowledge and skills when noting their feelings of confidence before and after the exam

with statements like “I was confident in my own ability going into the exam...I could get a five (the highest score possible),” or “I had done pretty well in the class so far, so I wasn’t stressed about the exam.” Others noted feeling as though they had performed well after experiencing the questions on the test, noting that “the practice examples we did in class were harder than the actual exam.” Participants attributed feelings of doubt in their abilities to perform at a high level on the exam to learning new skills or fundamentally altering their pre-existing understanding of music gained from their experiences.

Development of New Skills

All participants extensively referenced the development of new musical skills and re-training of already learned skills in the study. While each had their own struggles within the overall course framework, a relationship emerged in the data analysis between each participant’s struggles and unique background and prior experiences. Though Alex had difficulty recalling multiple aspects of AP Music Theory that challenged her abilities to grasp and learn new concepts and skills, she did recall challenges around sight-singing, “because of the type of activity and social anxiety it evoked during testing.” She recalled this experience was heightened during the exam, when she was tasked with sight-singing in front of her guidance counselor, who acted as a proctor. Other participants described challenges with aural skills that involved “complex listening,” as Dan put it. He had a hard time when tasked with hearing and recalling aural stimuli, asserting that he often “didn’t trust” his ears when attempting to identify chord inversions, or the presence of a fifth or seventh intervals in harmonic dictations. Will shared similar experiences with aurally identifying chords. Even though he had “a strong feeling of what sounded ‘good’

from prior musical study,” he experienced a disconnect between what he was hearing and what was represented on the page.

Oliver expressed the same concerns surrounding his experience with aural-based analysis, with the added struggle on AP examination review questions. Often in review or on the exam, he would need to recall long passages of music played in conjunction with several multiple-choice questions about the passage. Oliver considered his ears to be “fairly good”—honed by his time spent mixing his own music recordings—but he found on those question sets that he could not remember the beginning of the passage of music by the time he needed to answer a question about it, because it required a “different kind of listening...and was just a lot.” In our interview, when Oliver self-reported his overall score of two, he said that it aligned with what he expected, recalling that he struggled with tasks more complex than basic aural identification throughout the course, so it “made sense” that he would not do so well on the aural-based portion of the AP Exam.

Atmosphere for Learning

Participants regularly described the atmosphere for learning created in the AP Music Theory classroom. Each pointed to the uniqueness of AP Theory among their other classes throughout high school and noted that the classroom environment contributed to their enjoyment, learning, and increased their comfort in tackling challenging material.

Alex described the chorus room as comfortable and a place where she could immediately immerse herself in the material. She explained feeling secure about her learning, even though she may not have felt the most confident with the material being covered at the time. Dan expressed that he thought “you couldn’t teach that class in any other classroom besides the chorus room.” His words may be an exaggeration, but the

intention was clear: he felt safe in the environment created in the chorus room, and that certainly had an impact on his experience in the class. Will summarized:

In theory itself, it was a relaxed environment compared to a lot of the other [AP] classes that I had taken. It was a lot smaller, it didn't feel overwhelming, and for most of the year we were working with content that I was familiar with or had previous experience with, so that only furthered the comfortableness of the classroom. And having a teacher like you, obviously it's not going to be like, very strict. And I enjoyed being with the people that were in that classroom – I'm friends with almost all of them.

Data analysis revealed a high frequency of words like comfortable, relaxed, welcoming, natural, and “like being in choir” as participants described their time in the classroom, along with references to the other people in the class. In Oliver's interview, he focused a lot on the people that surrounded him in the theory classroom. He compared music theory to his time in select vocal ensembles at school:

I was in all those with my friends, so it was less like “this is a class, and you have to learn” and more “I'm learning all this stuff with my friends and we're working together...doing our part.” I remember it was really comfortable because obviously I had had you for all of my music experiences in high school, so I felt comfortable with you. I felt comfortable with the room and most of the people in the class I had known since kindergarten, so it was really just a lot less intimidating because of those factors.

Despite the positive communal atmosphere Oliver described, other participants expressed feeling as though they were constantly comparing themselves with others in the class. This manifested both positively and negatively. Dan mentioned “being more concerned for other people in the class” than he was for himself, because he noticed how frequently they relied on students like Dan, Will, and Alex to answer questions first. Alex recalled other students in the class who rarely answered questions, instead referring mostly to “Will and Sebastian (another student in the class) and me.”

Additional Participant Reflections

Additional topics emerging from interviews included comparisons to other coursework in high school and decisions surrounding motivations to enroll in the AP Music Theory class. Each participant successfully completed multiple AP classes in high school, with the lowest number being Oliver's nine and the highest Alex's 13 courses—Dan and Will completed 11 AP courses each. Every participant talked about their motivations to take AP Theory tied to their own musical growth and scholarship rather than to earn college credit through the AP examination. Will, Alex, and Dan noted that even though they all achieved a score of four, the second highest score possible on the exam, they either did not need the credits for college, or they would not have been accepted anyway. Dan remarked that the class allowed him to achieve a high enough score on a theory placement test so that he could begin in his university's Theory II course.

Participants emphasized that they considered their AP Theory experience beneficial, and that they learned a lot about the ways composers and arrangers approached writing music that they might not otherwise have learned from ensembles or private applied lessons. Alex's piano teacher "didn't really like theory," so her teacher did not incorporate much theory in her lessons. She stated that she continues to use knowledge from theory as she teaches herself on the common room piano in her dormitory, "when it's quiet enough." Will admitted that most of his orchestra experience in high school and college had been that "you rehearse the music together because that's what rehearsal is for," but if you had questions about theory, you needed to ask the director after rehearsal. Dan and Oliver cited actively using their knowledge from high

school theory—Dan is currently working on a minor in Music Theory and Oliver continues to write his own music and publish it independently online.

CHAPTER 5

DISCUSSION

The purpose of this research was to examine prior musical experiences of AP Music Theory students, with specific emphasis on ties to student perceptions and feelings of self-efficacy. To help guide this instrumental case study, I focused on three research questions: (1) What course skills addressed in AP Music Theory do students from different musical backgrounds feel most prepared to demonstrate within the context of the AP Music Theory examination? (2) What do student participants from different musical backgrounds cite as specific challenges in AP Music Theory? (3) How do students perceive their own musical backgrounds in relationship to their perceived success in AP Music Theory?

I approached this case study after conducting a similar pilot study in Spring 2022. From that study, several themes emerged among participant responses, including (a) atmosphere for learning, (b) connections between AP Music Theory and ensembles, and (c) additional school factors. Because of common themes among participant responses in the pilot study as well as my own observations of students experiencing challenges and successes while in my AP Theory classes, I sought a lens through which I could examine participant data. Bandura (1986, 1997) defined a person's self-efficacy as a belief in one's ability to carry out the actions necessary in the process of achieving a goal or outcome. It made sense that self-efficacy might play a role in AP Music Theory student experiences, but I could not locate any one study that compared student self-efficacy with AP Music Theory. Adjacent studies existed, such as those exploring undergraduates' experiences with aural skills study in college (Buonviri, 2015) and studies examining

musicians' feelings of self-efficacy across varied musical performances and settings (Afacan & Kaya, 2022; Hendricks & Smith, 2018; McPherson & McCormick, 2006). Based on other research on self-efficacy among musicians and students, and noting evidence of self-efficacy themes among pilot study responses, I decided to proceed with this study using self-efficacy as a lens.

Bandura (1997) identified four factors that affect self-efficacy among individuals: enactive mastery experience, vicarious experience, verbal persuasion, and physiological and affective states. I used these factors as *a priori* codes when I began data analysis and found that participant responses demonstrated notable parallels with Bandura's framework.

Enactive Mastery Experience

Enactive mastery experience is the most influential source of information on self-efficacy based on authentic evidence of whether an individual can succeed (Bandura, 1997). Mastery experience was the most tagged code across all data I collected for this study and was present throughout participant responses as they discussed their challenges and feelings of confidence while in AP Music Theory. Participants referenced feeling confident regarding their prior development of musical skills and knowledge through ensemble participation and private applied lessons. They often stated that they did not feel stressed when learning music theory fundamentals because they could already read notation, hear intervals, and sing or play a melody accurately.

During interviews, participants discussed how easy it was for them to answer written theory questions that asked for simple analysis or identification. They also highlighted the difficulty they experienced when performing completely new and

unfamiliar tasks. Participants counted “complex listening” among their biggest struggles—that is, listening that included hearing multiple notes at once, identifying chord inversions aurally, and hearing harmony changes in thick-textured musical excerpts, especially choral and orchestral.

The frequency of participant responses relating their past knowledge with the varying difficulty of learning course skills appeared to align with Bandura’s (1997) assertion that mastery experience was the most influential in predicting self-efficacy beliefs. Students in this particular class felt confident enough in their own musical abilities to perceive a large portion of the AP Music Theory course as easily achievable. Students only began to doubt their abilities when they were tested and applied in new ways. To help counteract this abrupt shift in confidence and self-efficacy development, AP Theory teachers might consider working with ensemble directors to infuse more explicit aural skills practice into rehearsals. Calling attention to development of specific listening skills within ensembles might prime future and current AP Theory students for future exposure within the AP class, and therefore prevent some doubt when instruction moves past the fundamentals chapters.

Vicarious Experience

In addition to enactive experience, individuals also judged their own capabilities vicariously by viewing others modeling successes and failures (Bandura, 1997). Being in a small class of 13, this group of students described feeling acutely aware of where they ranked among their peers. They also referred to each other independently when discussing their own feelings of success and comfort with course materials. Participants commented that there were a handful of students in the class who always seemed to be

getting answers very quickly, and others who lagged. Dan's assertion that he was concerned more for other students in the class rather than for himself, as well as his calling attention to other students relying on him to answer, may illuminate non-participant classmates' experiences with vicarious successes as well.

Other examples of vicarious experience among students arose from viewing their classmates as motivators for their own success. Alex compared herself to Will and Sebastian, and so described that if her peers appeared to grasp the material quickly, she would as well. Will remarked that seeing students of similar backgrounds and ability levels do well on coursework made him feel confident he would perform well on the exam, especially when engaging with new material. Teachers of AP Theory might consider ways to elicit vicarious feelings among members of the class by providing students a chance to teach or explain a concept to the class, or walk classmates through their process when approaching a part-writing or dictation question. Watching a peer succeed in front of the class may help a student to feel as though they can do the same.

Verbal Persuasion

In addition to providing a forum for experiencing vicarious successes, the collaborative and communal atmosphere of the AP Theory classroom reflected an opportunity for students to experience changes in their own self-efficacy through social persuasion. Acknowledgement of faith in one's abilities by another significant person can have a positive impact on self-efficacy if the appraisal is accepted and realistic (Bandura, 1997). Hendricks and Smith (2018) made note of the importance of communal music making and the social aspect of motivation to perform among peers. The social impact of this AP Music Theory class was significant and repeatedly referenced by study

participants, noting the classroom atmosphere and environment as important to their success with course material, but also important to their enjoyment of the class in general. Similarly to their vicarious experiences, students referenced their peers as helping to contribute to their own successes and confidence by reassuring them of their understanding and praising their abilities. Teachers can help to encourage peer to peer affirmations by modeling them with their classes, or placing students in situations where verbal feedback or praise from peers is more likely to occur. Indeed, having students explain their thought process when tackling a challenging question or placing students in groups to work through assignments together may be beneficial for all.

Physiological Responses

Bandura (1997) points to physiological responses most often when involving physical accomplishments and stressors. Participants in this study would agree that typical AP coursework includes a high-stress environment, which includes focusing on learning all materials required by the time of the test and then sitting for a three-hour standardized exam. Several participants noted physiological responses when approaching various performance tasks in AP Theory. Alex's references to social anxiety when performing solo sight-singing in front of the proctor highlighted a stress response. Feelings of nervousness or anxiety before sight-singing or completing a dictation might also point to the existence of a physiological effect on students' perceptions of their own performance ability. Participants all referenced self-doubt in a stressful testing environment, especially as it related to aural-based questions. On the exam, participants experienced a heightened level of stress knowing that they could only hear passages and examples a finite number of times, and tended to focus on the number of repetitions

rather than the musical content of the excerpt. Experiences such as this led participants to report lower levels of confidence post-examination, when they expressed doubt in their performance on aural-based questions.

When comparing participation in classroom activities, participants did not note the same levels of stress response. The absence of a physiological response could contribute to increased feelings of confidence or self-efficacy pre-examination, when students regularly referred to low-stress, welcoming, comfortable environment established in the AP classroom among myself and their peers. If my goal is for students to maximize feelings of self-efficacy in class and on the exam, perhaps the lack of physiological response during class activities is not most beneficial. Instead, it may be important for students to have more opportunities to undergo exam conditions during class time, which may help to lower their stress response during the examination. While I certainly do not want to diminish students' positive experiences in the class, I also would not want months of focus and hard work squandered by one high-stakes, high-stress exam.

Implications, Limitations, and Suggestions for Further Study

Participants in this study expressed that experiences in prior musical ensembles and applied lessons affected their success in AP Music Theory. These experiences manifested in several themes that highlighted the potential for changing feelings of self-efficacy throughout participants' time engaging in study in the AP Music Theory course, including (a) prior musical knowledge, (b) development of new skills, and (c) atmosphere for learning.

This study contributes to a large collection of research surrounding self-efficacy among students, this time focusing on one specific group: AP Music Theory students. As an instrumental case study, the goal was to examine a case that was common enough that it might be representative of other cases; however, due to the qualitative approach to study and small sample size, this study's findings are not generalizable to larger populations, but they may be transferable to other contexts. This study amplifies student voices and may aid teachers as they support growing students' new knowledge and skills. Several implications result for students taking AP Music Theory and teachers engaged in teaching and preparing AP Music Theory students.

Many factors affect students' ever-changing feelings regarding their ability to perform in academic and musical settings. It is our responsibility as their teachers to not only understand these factors, but to consider them when designing student instruction. I realized while conducting this study that I have failed to acknowledge the importance of self-efficacy in student success in my own classroom, and it is therefore likely that other teachers may overlook self-efficacy as well. As AP teachers, we are faced with the challenge moving through content quickly and "teaching to a test" that we do not create. In my own experience, I need to remind myself to stop and taking time to ensure students are feeling confident along the way. We, as teachers, may attribute student stress to "regular struggles" of engaging in college-level coursework in a high school setting rather than considering deeper possibilities. For example, a low grade on a harmonic dictation prompt may not represent a student's lack of understanding of the material, but rather a teacher's failure to provide opportunity for the student to develop their own feelings of self-efficacy and confidence when approaching such a prompt. Completing a

dictation together with the teacher allows the student to compare answers to one they might accept as “correct” and may also bolster their self-efficacy through vicarious experience at seeing a respected other successfully complete the task.

Notably, this study did not seek to measure students’ feelings of self-efficacy using an established scale, instead opting to use self-efficacy as a lens through which to view success in AP Music Theory. Future research should approach similar questions from a mixed methods perspective, giving voice to student responses while also striving to measure self-efficacy during and after student participants’ AP Theory coursework to better understand this important factor in predicting student success.

While participants in this study regularly referred to ensemble experiences and private applied lessons when describing the lack of challenge with theory fundamentals, they noted new challenges when asked to apply theory fundamentals in more complex ways. As a choir teacher, I acknowledge the need to spend more time honing students’ sight-singing and literacy skills and reduce their need to hear whole passages on the piano before singing them in song repertoire, in order to develop greater musicianship and encourage greater confidence in students’ abilities. Including more warmups and exercises where students must tune and change harmonies broadens students’ capacity to listen and apply their knowledge of theory—harmony, root, third, fifth, major, minor, leading tone—within the context of a choral rehearsal. The same recommendation could transfer to band and orchestra as well, with the added component of instrument timbre and the potential challenges of trying to hear all of the parts within the available instrumentation in the ensemble.

Several participants remarked that they would have felt much better approaching more difficult topics in the class if they had had another prerequisite “basic theory” course before taking AP. In our school, such a class would not be feasible due to lack of availability in teacher schedules. This pragmatic conundrum may be the case in other schools across the country and that possibility should be investigated. It would follow that for schools like our high school which lack the resources and staff to offer theory classes before AP, a deeper infusion of theory into ensemble curricula may be another strategy to scaffold necessary skills for student success in the entire course, not just the first three units, as participants in this study reported. The question of equitable education further complicates the issue of offering AP Music theory as a course in high schools. By nature AP Music Theory presents itself as an exclusive course, especially in districts like mine which require students who enroll in the course to take the exam as well. For students unable to pay the roughly \$100 exam fee at my school, they are excluded from taking the course if unable to secure some type of scholarship or financial assistance. This situation poses a difficult question for music teachers: what is the purpose of AP Music Theory, and are there better ways of ensuring our students develop the skills taught in that course? While the answers to these questions are beyond the scope of this study, teachers of AP Music theory possess an important platform from which to explore meaningful changes to the way we approach equitable music education in public schools, and should use that platform to continue probing for answers to these critical questions.

In conclusion, having the opportunity to discuss and understand my former students’ experiences has reminded me of the importance of gathering student perspectives and engaging in listening sessions with students to ensure an effective and

meaningful education. Already this year, I have considered the experiences of my former students interviewed in this study and the pilot study as I approached planning for my current class. As we progressed through the units in AP Theory, I provided students the opportunity to complete their online unit assignments together as a class. Students collaborate on shorter formative assessments, but must complete the more formal unit-end assessments independently to demonstrate their own knowledge and readiness for the AP Exam. So far, students seem to have very positive experiences with this change—they are much more open to asking questions and understanding the *why*, rather than only looking for correct answers to accrue the most points. Moving forward, I plan to take Alex's experiences with social anxiety and sight-singing and build-in more opportunities during class time to sing in various ways, including together as a class, in pairs, for me, and possibly with a different teacher in the room.

Hearing these student voices provide honest feedback about their experiences in AP Theory has been eye-opening and instructive for me. By heightening my awareness of my own students' perceived self-efficacy, I see my approach to planning instruction differently. Not only do I need to ensure students learn course material, but now I must take that a step further and help students build self-efficacy when approaching course tasks and the AP examination. Oliver, Alex, Dan, and Will provided exceptional insights about their musical experiences and time in AP Music Theory. I will continue working to ensure I provide the best possible experience for all of my students.

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APPENDIX A

IRB APPROVAL / EXEMPTION CERTIFICATE



Research Integrity & Compliance
 Student Faculty Center
 3340 N. Broad Street, Suite 304
 Philadelphia PA 19140

Institutional Review Board
 Phone: (215) 707-3390
 Fax: (215) 204-4609
 e-mail: irb@temple.edu



Approval for a Project Involving Human Subjects Research that is Approved as Exempt

Date: 07-Dec-2022

Protocol Number: 30070
 PI: ELIZABETH PARKER
 Review Type: EXEMPT
 Approved On: 07-Dec-2022
 Risk: Minimal risk
 Committee: A1
 Sponsor: NO EXTERNAL SPONSOR
 Project Title: Student Musical Experiences and Self-efficacy in AP Music Theory

 The IRB approved the protocol 30070.

The study was approved under Exempt review. The IRB determined that the research **does not require a continuing review**, consequently there is not an IRB approval period.

As this research was approved as Exempt, the IRB will not stamp the consent or assent form(s).

Note that all applicable Institutional approvals must also be secured before study implementation. These approvals include, but are not limited to, Medical Radiation Committee ("MRC"); Radiation Safety Committee ("RSC"); Institutional Biosafety Committee ("IBC"); and Temple University Survey Coordinating Committee ("TUSCC"). Please visit these Committees' websites for further information.

Finally, in conducting this research, you are obligated to submit the following:

- **Amendments - Any changes to the research that may change the Exempt status of this study must be reviewed and approved by the IRB prior to implementation.** Examples of such changes are: including new, sensitive questions to a survey or interview, changing data collection such that de-identified data will now be identifiable, including an intervention in the methods, changing variables to be collected from medical charts, decreasing confidentiality measures, including minors or adults lacking capacity to consent as subjects when previously only adults with capacity to consent were to be enrolled, no longer collecting signed HIPAA Authorization, etc. Please reach out to the IRB Staff with any questions about if a change to the study warrants an Amendment.
- **Reportable New Information** - Using the Reportable New Information e-form, report new information items such as those described in HRP-071 Policy - Prompt Reporting Requirements to the IRB **within 5 days**.
- **Closure report** - Using a closure e-form, submit when the study is permanently closed to enrollment; all subjects have completed all protocol related interventions and interactions; collection of private identifiable information is complete; and analysis of private identifiable information is complete.

For the complete list of investigator responsibilities, please see the HRP-070 Policy – Investigator Obligations,

the Investigator Manual (HRP-910), and other Policies and Procedures found on the Temple University IRB website: <https://research.temple.edu/irb-forms-standard-operating-procedures>.

Please contact the IRB at (215) 707-3390 if you have any questions.

If you would like to tell us how we are doing, please complete this 5-minute Satisfaction Survey: <https://forms.gle/9EcgYGDEEANvMw37>

APPENDIX B

INITIAL RECRUITMENT EMAIL

Email Invitation to participate in study

Good afternoon,

I hope you're all doing well in your first year of college! In my graduate coursework at Temple University, I'm currently conducting a study investigating student experiences in AP Music Theory alongside Dr. Elizabeth Parker, Associate Professor of Music Education. I am interested in gathering your perspectives on your experience in AP Music Theory with the following aim and research questions:

The purpose of this study is to examine student experiences in Advanced Placement (AP) Music Theory as they relate to prior involvement in specific school music programs or outside-school music experiences. Research questions include: Are there specific challenges in AP Music Theory for students with different ensemble or instrumental backgrounds? Does participation in certain school ensembles help to prepare students better for success in AP Music Theory? Are there musical factors which may affect student self-efficacy in AP Music Theory?

This research will involve a one-on-one interview of scheduled at a time and place convenient to you, followed by a second interview or focus group. The estimated duration of your participation is 60 to 120 minutes. I request to audiotape our interviews in order to reflect on our conversation and complete data analysis. Please know that you will be assigned a pseudonym or fake name to ensure confidentiality and you are free to

withdraw from participation at any time. At the end of the research study, I will share my findings with you.

This research has been approved by the Temple University Institutional Review Board. I have attached the consent form that details your participation in the study. I am glad to answer any questions you may have about your participation in this study and would very much appreciate a response at your earliest convenience. Thank you for your consideration.

Sincerely,

Nate Patton

APPENDIX C
CONSENT FORM

Title of research: Student Musical Experiences and Self-Efficacy in AP Music Theory

Investigator and Department:

Principal Investigator: Dr. Elizabeth Parker
Assistant Professor, Department of Music Education and Therapy
Boyer College of Music and Dance
Temple University, 2001 N. 13th Street Philadelphia, PA 19122
Contact Information: Elizabeth.Parker@temple.edu

Student Investigator: Nathan Patton
Master of Music Education Student
Boyer College of Music and Dance
Temple University, 2001 N. 13th Street Philadelphia, PA 19122
Contact Information: npatton@temple.edu

What you should know about this research study:

- Someone will explain this research study to you.
- You volunteer to be in a research study. Whether you take part is up to you.
- You can choose not to participate in the research study.
- You can agree to participate now and change your mind later.
- Your decision to participate will not be held against you.
- Ask any questions you want before and after you decide.
- You are not waiving any legal rights that you otherwise would have as a participant in a research study.

The estimated duration of your study participation will be from December 2022 to March 2023. Participation in this study will take approximately 60-120 minutes of your time. You will participate in one individual interview of 30-60 minutes which will be audio/video-recorded. A second interview of 30-60 minutes will be conducted with multiple participants, and will also be recorded. The second interview will take place no later than four weeks from the final individual interview. The investigator will interview you by asking questions about your experiences in school performing ensembles, prior musical activities, and Advanced Placement (AP) Music Theory class. The interview will take place via phone or other digital medium (i.e., Zoom, WebEx, FaceTime), or in-person at a location accessible to participants.

Any foreseeable risks to you are minimal. By participating in this research, you will help contribute to further understanding of the topic of study. Participation is not mandatory; you may choose to discontinue participation at any time.

Any responses you provide will be confidential. You will not be identified by name in any research materials. You will be assigned a pseudonym for use in organizing recordings and files, and for discussion in the written research report.

Please contact the researcher with any questions or concerns by calling 610-750-2757 or e-mailing: npatton@temple.edu.

This research has been reviewed and approved by an Institutional Review Board (IRB). You may call them at: 215-707-3390, or e-mail them at: irb@temple.edu if:

1. Your questions, concerns, or complaints are not being answered by the research team.
2. You cannot reach the research team.
3. You want to talk to someone else about the research.
4. You have questions about your rights as a research subject.

Audio recording: Participation in this study necessarily includes the audio/video recording of interviews. Recordings will be transcribed into text for analysis and will not be shared. You will be assigned a pseudonym for the purpose of referencing your responses in the written report and audio/transcription files. The audio files and transcriptions will be stored in a secure cloud and will be deleted within one year of your interview.

Confidentiality: We will limit the viewing of your personal information to people required to view the information. The IRB, Temple University, and its affiliates, and other representatives of these organizations may inspect and copy your information.

APPENDIX D
INTERVIEW PROTOCOL

1. Talk about your experiences with music during high school.
2. What ensembles, if any, did you participate in during high school?
3. What is your primary/secondary instrument if you had to choose?
4. How were you involved with music outside of school?
5. What role would you say music occupies in your life now?
6. Describe your experience in AP Music Theory in high school.
7. How would you compare preparation for the AP Theory course/exam to preparation for other AP courses/exams?
8. What elements of the AP Music Theory curriculum or class were you most comfortable with? (Aural skills? Dictation? analysis?)
9. What elements of the AP Music Theory curriculum or class were you least comfortable with?
10. What do you remember about being in the AP Theory classroom?
11. How would you describe the AP Music Theory setting?
12. Did your prior musical experiences affect your experience in AP Music Theory? What about those experiences would make you answer in the way that you did?
13. How did being in Theory and ensemble affect experiences in the other course?
14. Is there anything else you would like to add?