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Challenges to Student Success in an Introductory Music Theory I Course

Megan Darby
Walden University

Walden University

College of Education

This is to certify that the doctoral study by

Megan Darby

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Dr. Maureen Ellis, Committee Member, Education Faculty
Dr. Pamela Brown, University Reviewer, Education Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
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Abstract

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Doctoral Study Submitted in Partial Fulfillment

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A state college in the mid-Atlantic United States requires a music theory course for 4 of its undergraduate music programs. In the 6 years prior to this study, students had difficulty with the course, with many failing or withdrawing. Tinto's theory of student retention served as the foundation of the conceptual framework for this study, the purpose of which was to identify challenges to successfully completing the course. This purpose was reflected in the study's driving research question focused on students' experiences regarding challenges to success. In this instrumental case study, 12 students and 2 instructors participated in individual interviews, and 7 students participated in a focus group. Initial coding was used for the 1st-cycle coding phase. Axial coding was used for the 2nd cycle. Seven themes emerged through an iterative categorization protocol: 3 student-related themes, 3 college-related themes, and 1 theme relating to solutions for overcoming challenges to success in Music Theory I. Although data indicated that students experienced diverse challenges to success, the need for additional help was most evident. Thus, a logical project for this study was a music theory lab designed using best practices for course redesign and adult learning found in the literature and developed to support student learning of the concepts presented in Music Theory I. This study may contribute to positive social change by providing an opportunity for students at the college to receive academic support structured to meet their learning needs and improve their performance in Music Theory I, which may prevent students from withdrawing from or failing the course.

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Dedication

I dedicate this work to my husband, Bryan, who has wholeheartedly supported my musical career and pursuit of higher education throughout our years together. He committed to a challenging lifestyle yet continually offered true compassion, love, and support. I also dedicate this work to my daughters, Presley Jewell and Piper Jade, with whom I was pregnant during this academic journey. They were a true motivation to complete this milestone in my life. I also dedicate this work to my parents, who raised me to believe in myself and to work hard for what I want. They offered such love, encouragement, and wisdom during the most stressful times of my work. I am proud to be a first-generation student.

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I am thankful for and truly blessed to have had such tremendous support throughout the completion of this doctoral study. In particular, I recognize the founders of the bluegrass program at my college for the initial encouragement to seek a doctoral degree and for sharing their experiences and outlook on how to be successful in higher education. Additionally, I thank my talented students and bluegrass buddies who inspired me to seek a significant role in the unique field of bluegrass music. I thank my doctoral chair, Dr. Lynn Orr, and my committee member, Dr. Maureen Ellis, for their feedback on my project. I thank my in-laws, Sam and Theresa Darby, and my extended family, friends, and colleagues who shared their support or showed an interest in my academics and program completion. Finally, I thank the Granny on Spider Hill for her selfless support of my education.

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Section 1: The Problem

In the 1970s, a decline in students graduating from college drew attention to the condition of student persistence, specifically the causes behind a student's choice to remain in or leave school (i.e., student retention or attrition, respectively; Ramist, 1981; Tinto, 2006). Since that time, concern for student persistence has not diminished (Crowe, 2015; Tinto, 2006). Poor rates of student persistence may result from both student failure (Tinto, 2006) and withdrawal (Pleskac, Keeney, Merritt, Schmitt, & Oswald, 2011). Multiple factors may contribute to student failure and withdrawal at the college level (Pleskac et al., 2011). Some of those factors may include difficulty transitioning to the college setting (Turner & Thompson, 2014; Whannell & Whannell, 2014), lack of effective study skills (Turner & Thompson, 2014), choice of course enrollment (Black, Terry, & Buhler, 2015), poor academic performance (Pleskac et al., 2011), and lack of social support (Thomas, 2014a). Factors that contribute to student persistence in Music Theory I at a state college in the mid-Atlantic United States (referred to hereafter with the pseudonym MDU) were the focus of this study.

The Local Problem

Although Black et al. (2015) found that first-semester students tend to remain in school when they are enrolled in a specialty course related to their major, at MDU, first-year-music-program students consistently did not complete Music Theory I. In some cases, lack of course completion was the result of student withdrawal from the course. In other cases, lack of course completion is the result of student failure in the course. Music Theory I was one of four music theory courses offered at MDU. Because the course content in subsequent courses was built on each previous course, students had to pass

Music Theory I before they were eligible to enroll in Music Theory II and so forth for Music Theory III and IV. A grade of C (76%) or higher was required to pass the course. In the 6 years prior to this study, approximately one third of students enrolled in the course were not retained (Associate professor of music at MDU, personal communication, February 6, 2017; Visiting professor of music at MDU, personal communication, March 18, 2016). At the time of this study in 2017, however, administrators at MDU did not have a full understanding of the challenges faced by students in Music Theory I that may have been contributing to lack of student persistence.

Evidence existed that lack of student persistence in Music Theory I was a problem at MDU. Between 2011 and 2016, 21.1% of the 133 students enrolled in the course withdrew, and another 21.8% of the students in the course did not pass it. Combined, these percentages represented more than 42.9% of students originally enrolled in Music Theory I at the beginning of the fall semesters between the 2010-2011 and 2015-2016 school years. For comparative purposes, data for all students who enrolled in Music Theory I during the previous five fall semesters are presented in Table 1.

The problem in this study, that first year-music-program students at MDU consistently withdrew from or failed Music Theory I, was narrow in scope (i.e., the topic was very specific). At the time of this study, scant literature existed to support this problem in the greater educational setting. However, Marvin (2012) did indicate a need for remediation for first-semester students enrolling in music theory classes and implied that students need remediation because they are ill prepared to meet the curricular goals of a music theory class. In addition, the literature has shown that students in general often

struggle to transition to the college environment (Whannell & Whannell, 2014) and many drop out before graduating (Pleskac et al., 2011). These conditions, which would not have been detected through the performance auditions required for entrance into the music program at MDU, could have been associated with student withdrawal from and failure in Music Theory I at MDU.

Table 1

Student Withdrawals and End-of-Semester Scores for Music Theory I: 2011-2016

		Withdrawal		< 76[a]		77-84		85-92		93-100	
Course year	*N*	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
2011	23	3	13.0	5	21.7	3	13.0	10	43.5	2	8.7
2012	24	11	45.8	3	12.5	4	16.7	2	8.3	4	16.7
2013	22	5	22.7	3	13.6	3	13.6	5	22.7	6	27.3
2014	29	3	10.3	8	27.6	4	13.8	8	27.6	6	20.7
2015	23	5	21.7	3	13.0	5	21.7	5	21.7	5	21.7
2016	17	1	5.8	7	41.1	5	29.4	1	5.8	3	17.6

[a] Student scores of 76 or below represent course failure.

Rationale

Lack of persistence among first-year-music-program students enrolled in Music Theory I courses at MDU was problematic because students who failed to complete Music Theory I during their first semester were forced to delay their graduation date or decided to change programs (Associate professor music MDU, personal communication, October 3, 2016; Music Department Chair, personal communication, October 3, 2016;

Visiting professor of music, personal communication, October 3, 2016). Because Music Theory I was only offered during the fall semester, students who withdrew from or failed the course needed to wait until the following fall semester before they could reenroll in the class. For students majoring in vocal music and music education, delayed completion of Music Theory I inevitably resulted in delayed graduation. In order to maintain on-time graduation, vocal music and music education majors who faced delayed graduation as the result of withdrawal from or failure in Music Theory I often transferred to other music programs that did not require completion of all four music theory courses.

In addition to delayed graduation or changes in student program enrollment, lack of student persistence in Music Theory I was problematic because students who failed to complete Music Theory I during their first semester also may have experienced delayed "entrance to the teacher education [program], if the [transferring] student is a music education major, and possible financial aid probation or suspension due to too many hours taken and not enough progress made towards graduation" (Music Department Chair, personal communication, October 3, 2016). It was also possible that students could have been put on probation or suspended for lack of academic progress (Music Department Chair, personal communication, October 3, 2016).

For all of these reasons, an exploration of the challenges faced by students in Music Theory I that may have contributed to lack of student persistence in the course was warranted. Thus, the purpose of this study was to explore the perceptions of students who at any time were enrolled in Music Theory I at MDU (whether they failed, withdrew, failed/withdrew and were currently repeating, or passed) regarding the challenges of successfully completing the course. This purpose was logical given that administrators at

MDU did not have a full understanding of challenges faced by music program students in this regard and this study might generate data to provide the administrators with a better understanding of these challenges. This purpose also was logical because challenges that students faced may have contributed to their lack of persistence and failure in the course, and data generated about challenges to completing the course could be used to take steps toward alleviating some of those challenges, thereby potentially contributing to improved student persistence and course completion.

Definition of Terms

Attrition: Attrition, with regard to college students, refers to whether or not a student leaves school (Shaw & Mattern, 2013). In the literature, attrition often is used to express lack of persistence and thus used interchangeably with that term (e.g., Shaw & Mattern, 2013; Tinto, 1975). In the review of the literature for this study, I maintained authors' original uses of the term attrition when it was used to suggest a student's lack of persistence in college or a college course. As needed, I clarified other intended uses of the term.

Course completion: For the purposes of this study, course completion refers to student persistence in Music Theory I at MDU resulting in the award of credit hours to students for meeting course expectations. Grading scales on which the awarding of credits is based vary by institution and program. At MDU, a C (76%) or higher was considered a passing grade and represented course completion.

Persistence: Persistence, with regard to college students, refers to whether or not a student remains in (persistence/retention) or leaves (lack of persistence/attrition) school (Morrow & Ackermann, 2012). In this study, the term persistence was used in this way.

In the literature, persistence—or, more specifically, lack of persistence—has been used interchangeably with the term attrition (e.g., Shaw & Mattern, 2013; Tinto, 1975). In addition, the term persistence has been used interchangeably with the term *retention* in the general sense of a student's decision to remain in school (Crowe, 2015). In the review of the literature for this study, I maintained authors' original uses of the term persistence when it was used to suggest a student's choice to remain in or leave college or a college course.

Retention: Retention refers to the condition of college students remaining in school (Crowe, 2015; Shaw & Mattern, 2013). In the literature, retention may be referred to as persistence (Crowe, 2015). Typically, student retention has been discussed in terms of rates of students' return to college for sophomore year (e.g.; Crowe, 2015; Morrow & Ackermann, 2012). In the review of the literature for this study, I maintained authors' original uses of the term retention when it was used to suggest a student's choice to remain in college or a college course.

Withdrawal: Based on the description of student withdrawal policies in the MDU student handbook, for the purposes of this study, withdrawal referred to a student's disengagement from a class in which the student was registered for any given semester. At MDU, students could withdraw voluntarily or be withdrawn by the school registrar at the request of a faculty member for failing to adhere to class and school expectations for classroom behavior and attendance.

Significance of the Study

This study is significant because the data I generated by conducting it could be used to improve outcomes for students. The data pertain specifically to the challenges to

success faced by students in Music Theory I. By considering these challenges, I developed a project (see Appendix A) that can be implemented at MDU to improve student outcomes in Music Theory I and thus potentially increase student persistence in the course. If more students were able to persist in and complete Music Theory I during their first semester at MDU, fewer students would be likely to experience (a) delayed graduation, (b) delayed entrance into the teacher education program, (c) possible financial aid probation or suspension, and (d) possible academic probation or suspension. In addition, fewer students would be likely to change programs. The five scenarios I just described represent improved outcomes for students. Thus, results of this study and the potential resulting project may be used to improve long-term outcomes for music and music education students at MDU. It is in this capacity that this study has the potential for positive social change.

Research Question

The purpose of this study was to explore the perceptions of students who at any time were enrolled in Music Theory I at MDU (failed, withdrew, failed/withdrew and were currently repeating, or passed) regarding the challenges of successfully completing the course. The research question that guided the development of this study directly supported the purpose of this study. That research question was What are the challenges to success faced by students enrolled in Music Theory I at MDU?

Review of the Literature

In this section, I present a review of the literature. First, I discuss the conceptual framework for the study. Then I present a review of the literature related to the broader problem. At the time of this study, literature directly related to student withdrawal from

and failure in music theory courses was sparse. Similarly, little literature was available directly related to student withdrawal from and failure in college courses in particular. However, literature about student withdrawal from and failure in college in general was readily available. In some cases, the discussions were focused on students in their first semester or first year of college. In other cases, the discussions were focused on students at all levels of college. Literature on topics related to the issues of student withdrawal from and failure in college is the focus of the literature review in this study. In addition, literature on strategies for improving student retention/decreasing student attrition and for improving student achievement is presented.

Conceptual Framework

When conducting research, researchers typically use theories to provide a foundation for inquiry and discussion (Creswell, 2014). However, "some qualitative studies do not include an explicit theory . . . [but rather] present descriptive research of the central phenomenon" (Creswell, 2014, p. 75). By using descriptive research to develop a conceptual framework, a researcher can provide a larger context in which the study focus can be placed and through which the value of the study can be established (Marshall & Rossman, 2006). To develop my conceptual framework, I used both theories and descriptive research. The concept of student attrition was the basis of the conceptual framework for this study.

Students are uniquely impacted by the college experience (Pascarella, 2006) and often struggle to transition to the college setting (Pascarella & Terenzini, 1980; Tinto, 2006). In some cases, the challenges that students face result in failure and/or withdrawal from school (Tinto, 2006). Factors that may impact student transition include (a) feelings

of isolation, (b) difficulty adjusting to a new environment, and (c) inability to integrate new knowledge with previous information (Tinto, 2006). These categories may be considered within the broader concepts of academic and social integration (Ishitani, 2016) and institutional and social support (Thomas, 2014a), both of which can impact students' intent to remain in college (Thomas, 2014a) and predict students' intent to remain in college (Thomas, 2014b).

Institutional and social support can be interpreted as factors that could help alleviate students' feelings of isolation. Thomas's (2014a) finding that the learning environment can have a moderate, albeit indirect, effect on students' intent to remain in college supports the claim that students have difficulty adjusting to the new college environment. Perry's (1968) claim that rates of students' intellectual and ethical development vary and Ishitani's (2016) claims that academic and social integration are key factors in student retention also support the claim that some students may have difficulty transitioning to the college setting.

Much of the research on student retention has been based on overall student persistence in college rather than student persistence in a particular course. However, the underlying concepts of the research can serve as a means of understanding students' thought- and decision-making processes as well as their behaviors related to challenges to success in Music Theory I at MDU. Therefore, retention as a conceptual framework was valuable in this study.

Factors Related to Student Achievement

Student achievement in college is the result of more than just the capacity to perform academically (Camara, O'Connor, Mattern, & Hanson, 2015). Student

achievement in college is the result of numerous interrelated factors, which are evident in the literature. Researchers have (a) identified differences between groups with regard to these factors, (b) demonstrated correlations between factors and student achievement, and (c) shown the capacity of specific factors to predict student achievement. In this section, I discuss results from the literature showing these various relationships.

Preparation for college. Students' preparedness for college may impact their level of success in college. Preparedness for college may be determined using multiple parameters. In this section, I discuss three of those parameters: standardized assessments, academic performance, and skills and knowledge (specific to music programs).

Standardized assessments. Literature regarding the potential for standardized assessments of students' preparation for college to predict actual student achievement is mixed. Two of the most used standardized tests for assessing students' capacity for academic achievement during the first year in college are the SAT and the ACT (FairTest, 2007a). The College Board, which designs the SAT, has consistently claimed that the SAT is valid for predicting cumulative grade point average (GPA; FairTest, 2007b). American College Testing, the designer of the ACT, has claimed the same (FairTest, 2007c).

The long-used version of the SAT was revised in 2005 (Shaw, Kobrin, Patterson, & Mattern, 2012). A report from The College Board assessing the predictive validity of the revised version of the SAT using a sample of 2008 student scores showed that the SAT was a significant predictor of students' cumulative GPAs, results consistent with three previous analyses from The College Board using the same data set (Patterson & Mattern, 2011). Results also showed that the predictive validity of the SAT was enhanced

when the model included both SAT scores and students' high school GPAs (Patterson & Mattern, 2011). Results from similar analyses using a data set of 2009 scores produced similar results (Patternson & Mattern, 2012). The validity of the SAT to predict second-year cumulative GPAs has been shown to vary by college major as well as by gender, ethnicity, and level of parent education (Shaw et al., 2012). In 2013, The College Board announced plans to redesign the SAT, and in 2014, The College Board pilot tested the new assessment (Shaw, Marini, Beard, Shmueli, & Ng, 2016). Results of the pilot test showed that the redesigned SAT was as valid a predictor of students' cumulative GPA as the revised version currently in place and that it improved the predictive accuracy of high school GPA by itself to predict cumulative first-semester GPA (Shaw et al., 2016).

The ACT college preparedness assessment was developed in 1959, and over 1.8 million high school students take the ACT each year since that time (ACT, 2016). While the ACT assessment may be used to predict enrollment and retention status, collegiate academic proficiency, and degree attainment level, the assessment most typically is used to predict academic performance, specifically cumulative first-semester GPA (ACT, 2008). Researchers consistently have found the ACT to be a valid predictor of cumulative first-year GPA (e.g., Huh & Huang, 2016; Lenning, 1975; Noble & Sawyer, 2002). According to Bettinger, Evans, and Pope (2011), when the subsections of the ACT were evaluated separately for predictive validity, the math and English portions of the assessment were found to be highly valid predictors of student performance. With regard to composite scores, research results have been similar to those found for the SAT. Repeatedly, ACT scores have been found to increase the predictive validity of high school GPA alone (Huh & Huang, 2016).

Based on the perspective that student preparedness assessments are good indicators of student performance in college, such assessments also may be used as part of the college admission process (The College Board, 2016). However, despite ongoing claims from The College Board about the validity of the SAT to predict cumulative first-year college GPA, since the late 1980s, researchers have questioned the test's capacity in this regard (FairTest, 2007b). According to FairTest (2007b), a national center for fair and open testing supported by private and public donors including the National Education Association, the reason for these differing perspectives is the ongoing deceptive presentation of results on the part of The College Board, which presents data as linear correlations rather than actual *r* square correlation coefficients, the result of which is data that imply greater predictive validity than is truly evident. When predictive validity of the SAT is calculated as an *r* square correlation coefficient, data, including those from The College Board, have consistently shown high school GPA to be a better predictor of cumulative first-year college GPA than SAT scores (FairTest, 2007b). Although SAT scores can enhance the predictive validity of high school GPA in a model that includes both predictors, researchers have agreed that SAT scores alone are a weak predictor of cumulative first-year GPA (FairTest, 2007b). These results have been confirmed in more current research as well (see Hiss & Franks, 2014).

As is the case with the SAT, not all research has demonstrated the predictive validity of the ACT with regard to student performance in college. According to Bettinger et al. (2011), when the subsections of the ACT were evaluated separately for predictive validity, the science and reading portions of the assessment were either only slightly valid or not valid at all. Evidence also exists that the ACT is biased with regard to

gender, ethnicity, and socioeconomic status (FairTest, 2007c). In particular, the format of the test favors typical male thinking styles over female thinking styles, language choices favor native English-speaking students, and the coachability of the test favors students from higher income homes who can afford test-preparation courses or tutoring (FairTest, 2007c).

Studies conducted by ACT researchers show that when taken alone, high school GPA is a better predictor of first-year college performance than the ACT. For example, Noble and Sawyer (2002) found that high school GPA was a better predictor than ACT alone at the 2.00, 2.50, and 3.00 GPA levels. Huh and Huang (2016) found this condition to be true among (a) regular-tested students, (b) students receiving additional testing time, and (c) students with attention deficit disorder and reading disabilities. For all special-tested students, using only one predictor was found to result in overprediction of students' first-year performance in college (Huh & Huang, 2016).

Considering the evidence that shows the weak predictive validity of the SAT and ACT and the biases inherent in the ACT, researchers have argued that the ACT should not be used as a predictive measure for student performance (FairTest, 2007a). Since as early as 1990, colleges and universities have opted to make the reporting of SAT and ACT scores optional (FairTest, 2007b). One key reason for this trend is that school admissions officers understand the value of high school GPA and course rigor for determining student success in college (FairTest, 2016). By eliminating SAT and ACT scores from the admissions process, schools can attract a more diverse population without losing the ability to determine academic qualification (FairTest, 2016). At the time of this study, "half of the national liberal arts schools ranked in the 'Top 100' by the 2017 U.S.

News ‘Best Colleges’ guide are now . . . [test-optional universities, including] Bates, Furman, Holy Cross, Muhlenberg, Sewanee, Smith, Wesleyan and Whitman” (FairTest, 2016). Both public and private universities ($N = 900$) have made the decision to become test-optional universities (FairTest, 2016).

Academic performance. Other researchers also have found precollege academic performance to be a predictor of academic performance in the college setting. According to Slanger, Berg, Fisk, and Hanson (2015), academic difficulty is a predictor of student performance, with students who are prone to academic difficulty being more likely to have lower cumulative GPAs when compared to their peers who are less prone to academic difficulty. Whannell and Whannell (2014) found similar outcomes among students with lower levels of previous academic performance. In one national study of over 120,000 students at 4-year institutions, students who were underachieving at the precollege level were found to underachieve at even greater levels than were predicted (Shaw & Mattern, 2013). The reverse was true for overachieving students, who overachieved at even greater levels than were predicted (Shaw & Mattern, 2013).

Music skills and knowledge. At colleges with music programs, it is common for admissions procedures to include other types of performance assessments, specifically performance assessments of instrument skills, aural skills, and general knowledge of music theory (Lehmann, 2014). In a study of 93 students in a German music program, Lehmann (2014) found only a moderate correlation between precollege aural skills and final aural skills grades and between general precollege knowledge of music theory and final music theory grades. As was the case with SAT scores, Lehmann found that the best

predictor of academic performance was not admissions scores but rather students' precollege performance.

Demographic characteristics. Students who are successful at the college level tend to share particular demographic characteristics. Two overt demographic characteristics identified in the literature are age/maturity and ethnicity. I discuss the research related to these characteristics in this section.

Age. Student age has been found to be associated with student performance. According to Whannell and Whannell (2014), students who are more likely to be at risk of failure during their first semester of college are young in age. The idea that age impacts student performance has been corroborated by Logan, Hughes, and Logan (2016) who found that students in their junior and senior years of college outperformed students in their freshman and sophomore years of college by 0.143 grade points.

One reason that age may be related to student performance in college is that age is typically associated with social and emotional competence (i.e., maturity), which has been shown to be connected with student performance (Wang, Wilhite, Wyatt, Young, & Bloemker, 2012). According to Wang et al. (2012), students' levels of social and emotional competence can be improved through participation in a social and emotional learning seminar. The logic follows that if students' social and emotional competence can be improved, their performance also will improve (Wang et al., 2012).

Ethnicity. The trend in college student performance gaps with regard to ethnicity is not new. For example, data from a 12-year study of 330,000 college students from 101 colleges showed this trend for Black students from 1998 to 2009 (Lorah & Ndum, 2013). Despite a narrowing of the achievement gap over the years with regard to biology, Black

students continuously have underperformed in biology, English composition, college algebra, and social science courses when compared to White and Asian students (Lorah & Ndum, 2013).

In more current research and research including other minority groups, the trend remains apparent. For example, Logan et al. (2016) found that White students outperformed minority students by 0.42 grade points, and Keels (2013) found that "White and Asian students had the highest GPA (3.3), Latino students had a significantly lower GPA (3.1), and Black students had the lowest GPA (3.0)" (p. 313). Asian and White students may have done better than their Black counterparts because they had better family advantages, a better history of advantageous personal characteristics in high school, better high school GPAs, and higher rates of enrollment in advanced placement classes in high school (Keels, 2013). While Black and Latino students have reported higher rates of parental support, engagement in on-campus academic activities, and effort, these factors were not sufficient to raise GPAs to the levels achieved by the students' White and Asian peers (Keels, 2013).

Student characteristics. As is the case with demographic characteristics, students who are successful at the college level also tend to share particular personal characteristics. These characteristics are self-efficacy, lifestyle habits/skills, and academic habits/skills. I discuss the research related to these characteristics in this section.

Self-efficacy. When compared to students with lower levels of course self-efficacy (self-efficacy related to one's capacity to be successful in an academic course), students with high levels of self-efficacy have been found to be more likely to be

academically successful (Wright, Jenkins-Guarnieri, & Murdock, 2012). This relationship was found to be true after controlling for "gender, ethnicity, first-generation status, high school GPA, and initial level of college self-efficacy" (Wright et al., 2012, p. 292). Academic self-efficacy also has been found to be a predictor of students' first-semester GPA, while controlling for gender and majority/minority status (Krumrei-Mancuso, Newton, Kim, & Wilcox, 2013). Finally, mediated by first semester GPA and controlling for these same demographic variables, academic self-efficacy also has been found to be a predictor of end-of-year GPA (Krumrei-Mancuso et al., 2013).

Wright, Jenkins-Guarnieri, and Murdock (2012) explained the connection between self-efficacy and performance using aspects of Bandura's (1977) theory of self-efficacy embedded in Lent, Brown, and Hackett's (1994) social cognitive career theory. In both theories, a person's previous successful experiences based on a particular behavior serve as encouragement for that person to engage in that particular behavior again (see Bandura, 1977; Lent et al., 1994). Self-efficacy also is tied to outcome expectations, one's belief that a particular action will result in a particular outcome (Bandura, 1977; Lent et al., 1994). If a person does not perceive a benefit to a particular behavior, that person will be unlikely to engage in that behavior (Bandura, 1977; Lent et al., 1994). In the academic setting then, self-efficacy, combined with outcome expectations, can influence a person's goals and actions and thus performance outcomes (Lent et al., 1994).

Habits and skills. Students with certain lifestyle habits and skills have been found to do better in college. In particular, students who are organized, punctual, and reliable and who take pride in their work have been found to have higher GPAs than their

counterparts who do not share these habits and skills (Boateng, Plopper, & Keith, 2016). Organizational skills in particular have been found to be a predictor of first-semester GPA, while controlling for gender and majority/minority status (Krumrei-Mancuso et al., 2013).

Students with certain academic habits and skills also have been found to do better in college. For example, students with high rates of class attendance are less likely to be at risk of failing during their first semester of college when compared to students with high rates of class absences (Whannell & Whannell, 2014). Also, when compared to students who studied less, students who studied more were found to have achieved more during their first two semesters (41% vs. 63%, respectively; National Survey of Student Engagement [NSSE], 2015). In addition, while controlling for gender and both majority and minority status, attention to studying has been found to predict students' first-semester GPA (Krumrei-Mancuso et al., 2013). The connection between study habits and student performance is likely because positive study habits have been linked to better use of learning strategies and engagement in higher level learning during freshman year, which likely is related to students' improved academic outcomes (NSSE, 2015). According to the NSSE (2015), students who have good study habits in high school are more likely to have good study habits in the college setting.

Personal factors. Researchers have identified personal student factors associated with student achievement in college. These factors are anxiety, stress over money, and employment. For first semester college students in general, anxiety about their new environment and experiences (attachment anxiety) can impact their academic performance (Kurland & Siegel, 2013). This anxiety is likely the result of students' poor

capacity to cope with new stressors associated with the college setting, which typically will differ from the high school setting from which they came (Kurland & Siegel, 2013). Students who do not feel secure with the transition between academic settings may experience anxiety (Kurland & Siegal, 2013).

As opposed to anxiety resulting from the intrinsic need for reassurance, other students may be impacted by stress resulting from the extrinsic need for money. According to the NSSE (2015), students surveyed in 2015 reported being as stressed about finances as students who were surveyed in 2012; for both groups, students reported that concerns over finances interfered with their academic performance. Students who experience financial stress are also likely to be students who work, a factor that also may impact student achievement.

Logan et al. (2016) found that students' GPAs were negatively affected by their employment at off-campus jobs. Although working impacted all students, students who worked more than 20 hours per week at an off-campus job were more likely to be impacted by their work than students who worked fewer than 20 hours per week at an off-campus job (Logan, Hughes, & Logan, 2016). On average, students who worked more than 20 hours at an off-campus job had a GPA 0.246 points fewer than other students (Logan et al., 2016). When year in school was included in the analyses, the impact of work on GPAs showed that freshmen and sophomore students who worked more than 20 hours at an off-campus job had GPAs 0.552 points lower than their junior and senior peers (Logan et al., 2016). Logan et al. suggested that upperclassman may be less impacted by work than lowerclassmen because the upperclassman have had more time to learn how to manage their academic and employment demands simultaneously

and perhaps because the upperclassman may be working in internship positions that garner a class grade and thus encourage success in both capacities.

Support from others. Support from others may impact a students' academic performance at the college level. In this section, I discuss related research that supports that claim. For the purposes of this study, I have categorized support from others into campus community and institutional support.

Campus community. According to Wilkins (2014), there is a relationship between academic integration and educational success for college students, a relationship that is mediated by race and gender. In her study of Black and first-generation White male college students, Wilkins found that first-generation White male students experienced greater academic integration than Black male college students. DeBard and Sacks (2012) also found that engagement in the campus community could impact students' academic outcomes. More specifically, DeBard and Sacks found that membership in Greek organizations was related to higher levels of academic achievement when compared to nonmembership. Women were found to experience greater academic benefits from participation than men experienced (DeBard & Sacks, 2012). DeBard and Sacks found these relationships remained after controlling for differences at the precollege level using both GPA and ACT scores.

Clark and Cundiff (2014) also found a connection between engagement in the campus community and student outcomes. Albeit weak, Clark and Cundiff found a positive connection between student participation in a freshman experience course and student achievement. Students who were enrolled in the course were more likely than

students who were not enrolled in the course to have higher GPAs during their first year at the college level (Clark & Cundiff, 2014).

Institutional support. According to research results, institutional support that impacts student outcomes may be personal or academic in nature. On a personal level, having quality relationships with academic staff can impact students' academic outcomes. According to Whannell and Whannell (2014), students in a bridging program who reported that staff were supportive of their efforts to complete their program of study were at decreased risked of poor performance during their first semester in college. The association between quality relationships with staff and positive student outcomes may be apparent because of the strong positive association between quality staff support and students' emotional commitment, academic identity, and class attendance, all of which may help students perform better in school (Whannell & Whannell, 2014).

On an academic level, support from instructors in the form of well-designed lessons also may impact student outcomes. For example, Callahan (2015) found that 37 students who engaged in out-of-class digital keyboard assignments into which music theory concepts were embedded not only performed better academically in their music theory course but outside of the course as well. This connection was likely associated with other findings that showed students who participated in out-of-class digital keyboard assignments better "understood connections between theoretical concepts and their application in real pieces . . . and most emphatically, they could place what they learned in music theory into a musical context with concepts learned in a music theory course" (Callahan, 2015, p. 12). Based on both qualitative and quantitative data, Callahan concluded that by changing the way students experience learning in a music theory

course, from a lecture format to a hands-on format, student learning of music theory and subsequent use of music theory concepts in other areas of study can be significantly improved.

Factors Related to Student Persistence (Retention and Attrition)

Student retention is largely dependent on a student's capacity to transition to the college setting (Pascarella, 2006; Pascarella & Terenzini, 1980; Tinto, 2006), a condition mediated by a variety of factors. These factors may be intrinsic or extrinsic in nature. Factors related to student attrition include preparation for college, demographic characteristics, student characteristics, personal factors, and support from others, all of which may be indirectly related to academic performance, another factor related to student attrition. I discuss these factors in this section.

Preparation for college. Students' preparedness for college may impact their willingness and capacity to persist in their studies. For the purposes of this study, I considered lack of requisite knowledge for success and academic performance indicators of students' lack of preparedness for college. I discuss these two concepts in this section.

Lack of knowledge. Students' preparedness for college may impact their capacity to persist in their studies. Wheland, Butler, Qammar, Katz, and Harris (2012) found students deciding whether to withdraw from or remain in a course reported that they considered lack of necessary background knowledge as a factor in their decision-making process (Wheland, Butler, Qammar, Katz, & Harris, 2012). Lack of knowledge also was found to be a contributing factor to retention among music majors. Although students' general music knowledge, knowledge that might be gained in written music skills courses for example, has been posited to develop more quickly than students' ear-training (aural)

skills (Rifkin & Stoecker, 2011), music faculty from various institutions have identified a need for remediation for first semester students enrolling in music theory classes (Marvin, 2012). As suggested previously, the implication in the need for remediation is that these students may be ill-prepared to meet the curricular goals of a music theory class (Marvin, 2012), a condition that could contribute to student withdrawal from and failure in music theory classes.

Academic performance. While researchers have taken different approaches to understanding the impact of academic performance on student attrition, the research consistently shows that academic performance does impact student attrition. Pleskac et al. (2011) used an employee turnover model as a framework for developing a student withdrawal model. The model was developed using first semester freshman students from 10 universities (Pleskac et al., 2011). Six life events, referred to as *shocks*, were found to be significant at the $p < .05$ level. One of these shocks was poor academic performance—specifically, an unexpected bad grade (Pleskac et al., 2011). Some students may be more resilient and not consider withdrawing from a course based on one poor grade but rather consider withdrawing based on their risk of failing the entire course (Wheland et al., 2012).

According to Slanger et al. (2015), academic difficulty is a predictor of student retention, with students who are prone to academic difficulty being more likely to withdraw from school when compared to their peers who are less prone to academic difficulty. For this reason, students also may consider low levels of previous academic performance (Whannell, 2013) and poor academic integration (Ishitani, 2016) in their decision to drop a course or leave school entirely. This situation is evident in the work of

Shaw and Mattern (2013) who found that when compared to students with lower GPAs, students with higher GPAs are more likely to stay enrolled in school (Shaw & Mattern, 2013). Shaw and Mattern also found, however, that students who performed as expected were more likely to remain in school than either under- or overperforming students (Shaw & Mattern, 2013).

Demographic characteristics. Students who persist in their courses and remain in school at the college level tend to share particular demographic characteristics. Three overt demographic characteristics identified in the literature are age, ethnicity, and gender. I discuss the research related to these characteristics in this section.

Age. With regard to age, Whannell (2013) found that students who were at risk of dropping out of a bridging program were younger than students who remained in the program until its completion. These findings were significant at the $p < .001$ level (Whannell, 2013). Among students ages 17-24, low attendance rates, mediated by staff support, impacted the correlation between age and attrition (Whannell, 2013). Maturity, which is typically associated with age, likely played a part in these study findings (Whannell, 2013).

Ethnicity. Minority students typically underperform in the college setting when compared to their nonminority peers. One reason for this may be the poor transfer of academic skills. According to Wilkins (2014), when compared to first generation White men attending predominately White universities, Black men are less likely to be able to transfer successful high school identity strategies to the college setting. These finding are logical in light of the research (e.g., Tinto, 1999; Turner & Thompson, 2014; Whannell &

Whannell, 2014) that shows when students fail to transition effectively to the college setting, they are likely to experience academic failure and/or leave school.

Lack of minority persistence is evident in retention to graduation data. In a study of students from 24 predominantly White universities, Keels (2013) found significant retention to graduation gaps for Black and Latino students. Whereas 92% of White students and 90% of Asian students persisted to graduation, only 86% of Latino students and 80% of Black students persisted to graduation (Keels, 2013). Although ethnicity appeared to be a strong indicator of student performance in college, Keels recognized that this noted impact may be the result of ethnicity, socioeconomic status, and gender combined rather than of ethnicity alone.

Gender. Gender has been found to be a variable in student retention to graduation. According to Ross et al. (2012), of students in a graduating class of 2009, fewer male students (64%) earned their degree after 4 years when compared to female students (72%). In addition, Ross et al. found this gender gap to be consistent across ethnicities. When compared to White (69%), Black, (48%), Hispanic (46%), Asian (66%), and multi-race (63%) male students, White (77%), Black, (53%), Hispanic (56%), Asian (84%), and multi-race (68%) female students attained greater rates of degree completion (Ross et al., 2012).

Keels (2013) also found gender to be a variable in student retention to graduation among minority students (Keels, 2013). Among Black students, the 4-year graduation rate for women was 15% higher than it was for men (63% vs. 48%, respectively), and the 6-year graduation rate for women was 11% higher than it was for men (84% vs. 73%, respectively; Keels, 2013). This gap remained while controlling for the educational

attainment of the students' mothers (Keels, 2013). While retention to graduation rates of Latino students also varied according to gender, the 4-year and 6-year graduation rates for women and men were 70% vs. 63% and 88% vs. 83%, respectively, these differences disappeared when other demographic variables were considered (Keels, 2013).

Student characteristics. As is the case with demographic characteristics, students who persist in college also tend to share particular personal characteristics. These characteristics are mindset, lifestyle habits/skills, and academic habits/skills. I discuss the research related to these characteristics in this section.

Disposition. A person's disposition or mindset can impact their decision to withdraw from or remain in school. For example, self-confidence, in part developed in the context of one's environment, is a key factor that can impact a student's intention to remain in college (Thomas, 2014a, 2014b). In particular, when compared to students with lower levels of course self-efficacy, students with high levels of course self-efficacy have been found to be more likely to persist toward graduation (Wright et al., 2012). Self-confidence may be of particular concern for students in applied music programs who are required to engage in instrumental performances during music lessons and studio practice sessions (Gavin, 2012, 2016).

A student's level of motivation also may impact a student's decision to withdraw from or remain in school. Motivational attitude has been found to be significantly related to both intent to persist and actual persistence in school (Morrow & Ackerman, 2012). Levels of both intrinsic and extrinsic motivation have been correlated with retention among first-semester college students (D'Lima, Winsler, & Kitsantas, 2014). The higher

the level of motivation, the greater the tendency to remain in school (D'Lima et al., 2014).

Finally, depression may impact a student's decision to withdraw from or remain in school. Students who become clinically depressed have been found to be more likely to withdraw from school than students who do not experience depression (Pleskac et al., 2011). The impact of depression on a student's decision to withdraw from or remain in school may be mediated by the cumulative effect of experiencing multiple stressors (i.e., shocks) during a student's first year in college (Pleskac et al., 2011).

Lifestyle habits/skills. Students with certain lifestyle habits and skills have been found to persist in college when compared to students who do not possess these same habits and skills. For members of marginalized populations in music education programs in particular, effort, tenacity, and commitment have helped students persevere in their studies while facing personal challenges (Fitzpatrick, Henninger, & Taylor, 2014). It is likely that in part, the display of such qualities help students develop relationships with mentors and peers, that in turn provide motivation to persevere in their studies (Fitzpatrick et al., 2014).

Certain lifestyle habits and skills also may indirectly impact student retention. Previously it was noted that according to Boateng, Plopper, and Keith (2016), students who are organized, punctual, and reliable and who take pride in their work have higher GPAs. Also as previously indicated, academic performance consistently has been associated with persistence in college (e.g., Ishitani, 2016; Pleskac et al., 2011; Shaw & Mattern, 2013; Slanger et al., 2015; Whannell, 2013; Wheland et al., 2012). It is in this

way that a student's organizational skills, punctuality, reliability, and pride in his/her work may impact student attrition.

Academic habits/skills. One obstacle facing students during their transition from high school to college is lack of effective academic habits/skills (Turner & Thompson, 2014). Among 30 freshman and sophomore college students asked to identify obstacles to success they faced during their transition to the college setting, 65% reported poor development of effective study skills, a condition Turner and Thompson (2014) associated with student persistence in college. Likely, Turner and Thompson assumed the connection between effective study skills and student persistence in school based on the understanding that effective study skills are associated with improved academic performance and the literature demonstrating that academic performance is associated with student retention. In a study similar to that conducted by Turner and Thompson, students deciding whether to withdraw from or remain in a course reported considering their lack of dedication to studying as a factor in their decision-making process (Wheland et al., 2012).

Another obstacle facing students during their transition from high school to college is poor attendance (Whannell, 2013). Students deciding whether to withdraw from or remain in a course have reported considering attendance problems as a factor in their decision-making process (Wheland et al., 2012). Students who do not persist in college also have higher rates of class absences (Whannell, 2013).

Personal factors. Researchers have identified a variety of personal student factors associated with student persistence in college. One of the most noted personal factors that may impact a student's decision to withdraw from or persist in college is

financial strain. This financial strain may be evident in the form of lost financial aid or increases in the cost of tuition and/or living and housing costs (Pleskac et al., 2011). Another personal factor that may impact a student's decision to withdraw from or persist in college is family strain. The responsibility of having to care for one's family in addition to one's academic obligations can interfere with a student's capacity to remain in school (Fitzpatrick et al., 2014).

Although Fitzpatrick, Henninger, and Taylor (2014) did not distinguish between types of family obligations that students might consider when they are deciding whether to withdraw from or persist in college, it is possible that students may be dependent young adults who have obligations to contribute to their household in some way that interfere with their capacity to be successful in school and thus impact their decision making with regard to persistence. It is also possible that students may be heads of their households and thus have responsibilities associated with this role that may keep them from being successful in school and thus impact their decision making with regard to persistence. Students also may be caregivers of a family member, a responsibility which may be time consuming, therefore interfering with their capacity to be successful in school and thus impact their decision making with regard to persistence.

Other personal factors have been noted in the literature with regard to a student's decision to withdraw from or persist in college. For example, students may experience personal tragedies (Gavin, 2012) or consider recruitment by other universities and roommate conflicts as part of their decision-making process (Pleskac et al, 2011). Though school selectivity in and of itself may not have an impact on overall rate of graduation from 4-year colleges (Heil, Reisel, & Attewell, 2014), course selectivity may have an

impact on retention at the beginning of a student's academic career. More specifically, enrollment in a course related to a student's major during his/her first semester in school can impact rates of student retention to the subsequent semester (Black et al., 2015). For students in music programs, stress (Gavin, 2015) and performance anxiety may become debilitating and impact a student's capacity to be successful in the program and thus lead to program withdrawal (Gavin, 2012).

Support from others. Support from others may impact a students' persistence in college. In this section, I discuss social support, campus community, and institutional support. Although social support and support from the campus community are essentially both social in nature, because social support typically is considered to be support at the individual level (student/peer, student/instructor, student/advisor, student/mentor, etc.) as opposed to social support in a group setting, I have divided these concepts into separate sections.

Social support. According to Thomas (2014a), a key factor that can impact a student's intention to remain in college is social support. Not only has social support been found to be significantly correlated to a student's intention to remain in school (Thomas, 2014a), but it has been found to be a significant predictor of a student's intention to remain in college (Thomas, 2014b). Peer support also has been found to be significantly related to actual (as opposed to intended) persistence in school (Morrow & Ackerman, 2012; Whannell, 2013). For members of marginalized populations in music education programs, support from students from the same population can motivate students to persevere in their studies (Fitzpatrick et al., 2014). Having a friend(s) to help figure out

and manage the university experience and encourage a positive attitude can contribute to motivation in this regard (Fitzpatrick et al., 2014; Gavin, 2016).

Campus community. Support from the campus community, garnered in a variety of ways, can influence a student's decision to persist in school. For example, students who engage in on-campus activities and events are more likely to persist in college that students who do not engage in such pursuits (Turner & Thompson, 2014). Although engagement in on-campus activities and events in general have been found to impact student persistence, specific campus community connections also have been found to impact student persistence. For example, Clark and Cundiff (2014) found a positive, albeit weak, connection between student participation in a freshman experience course and student attrition. Students who were enrolled in the course were more likely than students who were not enrolled in the course to return to the college for a second year of study (Clark & Cundiff, 2014). Also, DeBard and Sacks (2012) found that membership in Greek organizations related to greater student retention when compared to nonmembership. This relationship was evident while controlling for differences at the precollege level for both GPA and ACT scores (DeBard & Sacks, 2012).

Similar results have been found for students in a music program in particular. According to Crowe (2015), participation in a music ensemble among first semester freshman was significantly correlated with student persistence in college through 3 subsequent years. Crowe suggested that this connection was not surprising because being a member of an ensemble can provide its members with a form of social support, and thus promote retention.

Institutional support. According to Thomas (2014a), a key factor that can impact a student's intention to remain in college is institutional support. Institutional support has been found to be significantly correlated to a student's intention to remain in school (Thomas, 2014a). Institutional support also has been found to be a significant predictor of a student's intention to remain in college (Thomas, 2014b).

One specific type of institutional support that can impact student retention is support from school staff. Faculty support has been found to be significantly related to intent to persist in school (Morrow & Ackerman, 2012). Faculty support also has been associated with actual student retention. When compared to students who remain in a program, students who drop out of a program tend to have poorer relationships with school staff (Whannell, 2013) and fewer interactive relationships with instructors (Turner & Thompson, 2014). One reason that poor relationships with school staff can impact student attrition is that when students do not have good relationships with school staff, they may not receive sufficient academic advising support and thus make poor choices regarding their academic career, which ultimately can lead to poor academic outcomes and withdrawal from school (Turner & Thompson, 2014).

The development of relationships with school staff can be especially impactful for minority and marginalized populations. For Latino students, for example, the development of relationships with school staff can have an impact on student retention because mentors can help students feel like members of the school community, a situation that has been shown in the literature to impact student achievement (Herrera, Morales, Holmes, & Terry, 2011). In turn, sense of school membership (Clark & Cundiff, 2014; Crowe, 2015; Turner & Thompson, 2014) and student achievement (Ishitani, 2016;

Pleskac et al, 2011; Shaw & Mattern, 2013; Slanger et al., 2015; Whannell, 2013; Wheland et al., 2012) can impact student retention. For members of marginalized populations in music education programs, support from academic advisors and instructors was found to motivate students to persevere in their studies (Fitzpatrick et al., 2014). Having mentors who helped students have positive college experiences contributed to motivation in this regard (Fitzpatrick et al., 2014).

Strategies for Improving Student Retention and Achievement

In this section, I discuss strategies for improving student retention and achievement. I discuss these topics in this way because the links between the variables addressed by the strategies and either student retention or achievement are indirect and typically based on assumed mediating relationships. Although the findings in the studies discussed here do not show direct relationships between the variables of interest in this study, they do provide a secondary layer of support for the concepts explored in this study and thus are worthy of inclusion here.

Retention. During my research for this literature review, I identified three specific strategies for increasing student retention. The first strategy is the use of learning communities, a form of institutional support. According to Tinto (1999), one way students transitioning to college may overcome challenges that contribute to attrition is by participating in learning communities. These learning communities can provide a variety of support structures for beginning students (Tinto, 1999).

A second strategy for increasing student retention is to use data-driven decision making. The use of data-driven decision making can ultimately contribute to more personalized learning for students, which, according to Dietz-Uhler and Hurn (2013), can

promote student retention. The use of learning analytics can support data-driven decision making (Dietz-Uhler & Hurn, 2013).

A third strategy for increasing student retention is to support students' academic achievement. Copeland and Levesque-Bristol (2011) suggested that student retention among university students ultimately could be improved by supporting a positive learning environment. According to Copeland and Levesque-Bristol, (a) external pressures, both parental and financial; (b) student expectation of the university experience; and (c) teacher influence work together to define the university's learning climate. The learning climate in turn influences a student's sense of autonomy, competence, and relatedness of the learning experience, all of which work together to determine a student's level of self-determination (Copeland & Levesque-Bristol, 2011). Students with high levels of self-determination experience high levels of interest and enjoyment in their studies, perceive themselves to be competent and active decision makers in their learning process, and perceive their studies to be important and valuable (Copeland & Levesque-Bristol, 2011). Students who experience these conditions, Copeland and Levesque-Bristol hypothesized, are likely to be academically successful, and ultimately, remain in school.

Achievement. During my research for this literature review, I identified two specific strategies for increasing student achievement among college students. The first strategy is the reduction of alcohol consumption. Decreasing the amount of alcohol students consume on weekends could improve student outcomes because student drinking impacts students' sleep patterns (Singleton & Wolfson, 2009) and mood (Howland et al., 2010), both of which can impact student achievement. One way to decrease student drinking during their first semester may be to promote communication with parents.

Small, Morgan, Abar, and Maggs (2011) found that when parents communicated with their first-semester college students during the week, the students drank less on the weekend. Based on these findings, Small et al. suggested that college promote such communication between parents and their college students.

The second strategy for increasing student achievement is to increase levels of teacher efficacy. According to Duker, Gawboy, Hughes, and Shaffer (2015), increasing levels of teacher efficacy can translate to improved student outcomes for students enrolled in music theory courses. Efficacy for teachers of music theory can be improved using standards-based grading, just-in-time teaching, and inverted classroom strategies (Duker, Gawboy, Hughes, & Shaffer, 2015).

Implications

Prior to beginning this study, I could not know what data student participants would provide. However, I assumed it was likely that students would identify similar issues identified in the literature. For example, students often struggle to transition to the college environment (Kurland & Siegel, 2013) because they (a) are not engaged in activities and events, (b) lack an interactive relationship with instructors, and (c) lack sufficient academic advising support (Turner & Thompson, 2014). If students in this study indicated that transitioning to the college environment was a challenge to success in Music Theory I, one possible study project could have been the development and implementation of a support program for new students in music programs at MDU. The program could have consisted of a mentor program and instructor training. The mentor program could have been designed so that junior and senior music program students are paired with freshman music students. The junior and senior students would have

functioned in a big brother or big sister capacity to help the new students feel more comfortable attending campus events and participating in campus activities. The instructor training element of the program could have consisted of a workshop in which the instructors learned about support services available for students and the appropriate practices for accessing those services. By implementing a mentor program and instructor training, student transition to the college environment could have been improved. Junior and senior students also would have benefited by participating in this program not only because they would have developed new relationships with fellow students but because they could have used this volunteer experience to enhance their academic resumes.

Another possible study project to support student transition could have been the enhancement of the current MDU orientation program for freshman. The course was intended to help students navigate their transition to the college environment. During the first weekend before school starts, students were required to attend activities focused on topics such as organization, time management, and study skills. However, the orientation program was generic and did not take into consideration the special needs of students based on their program of study. This meant that students in the music program participated in orientation activities alongside students in the education and forestry programs. The orientation program in place at the time of this study could have been enhanced by restructuring the orientation so that students participated in cohorts based on their program of study. Such an organizational structure would have allowed for the tailoring of orientation activities so that they best supported students' specific needs based on their program of study. In this way, students in the music program may have

been better prepared to transition to the college setting, which could have helped improve student outcomes in Music Theory I.

If students in this study indicated that lack of interactive relationships with instructors and lack of sufficient academic advising support were challenges to success in Music Theory I, one possible study project could have been the development of an instructor training program. The program could have consisted of several workshops and the development of a professional learning community implemented over the course of a semester. The workshops would have been designed to coach instructors on best practices for initiating and maintaining relationships with students and for advising students. The professional learning communities would have supported ongoing collaborative efforts on the part of the instructors for continued improvement of practices in all three of these areas. Through this type of instructor training program, interactive relationships between students and instructors could have been developed and academic advising support could have been improved.

Not only do students struggle to transition to the college environment and lack relationships with and support from instructors, they also often have poor study skills (NSSE, 2015) and lack the level of content skill needed for success in college courses (Marvin, 2012). If students in this study indicated that lack of study skills and content knowledge were challenges to success in Music Theory I, one possible study project could have been the development of a music theory lab course. This course could have been designed as a general study course; the course curriculum would have complemented the Music Theory I curriculum as a means of providing content remediation but also would have included a focus on study skills. The music theory lab

also would have included unstructured time during which the instructor would have functioned as a tutor, helping students with their specific self-identified needs. If students were provided an opportunity for remediation and to gain valuable study skills, student performance in Music Theory I likely would have improved.

Another possible study project that could have been implemented to address students' potential lack of content skills could have been the development and implementation of an introductory music theory course. This course could have been developed in an online format and offered during the summer semester on a voluntary student enrollment basis. An online music theory knowledge discovery pretest could have been offered to new students accepted into the program as a means of self-evaluation. School administrators could have been prompted to encourage music program students to test their foundational understanding of music theory by completing the pretest. Students who earned less than an 80% on the pretest would then have been encouraged to enroll in the introductory music theory course. If students were provided an opportunity to identify their level of content knowledge regarding music theory and offered a means of improving their knowledge of music theory when a deficiency was indicated, students who took advantage of the introductory music theory course would have subsequently entered Music Theory I bettered prepared, thus having improved their chances of success.

Summary

At MDU, first-year-music-program students consistently withdrew from or failed Music Theory I. However, administrators at MDU did not have a full understanding of student perceptions with regard to the challenges associated with being a first-semester student in Music Theory I that may have been contributing to lack of student persistence.

Thus, the purpose of this study was to explore the perceptions of students who at any time were enrolled in Music Theory I at MDU (failed, withdrew, failed/withdrew and were currently repeating, passed) regarding the challenges of successfully completing the course. Based on the literature, it was possible that participants might identify challenges such as lack of preparation for college and lack of support from others and that demographic characteristics, student characteristics, and personal factors might become apparent as challenges to student success. Data generated about challenges to completing the course were used to develop a project that could be used to take steps to alleviate some of those challenges, which potentially could contribute to improved student persistence and course completion. The focus of Section 2 is the study methodology, the focus of Section 3 is the project, and the focus of Section 4 is my reflections on the project and the study process.

Section 2: Methodology

In this section, the research design and approach for this study are discussed. In addition, the participants and the criteria for selecting them are described. The data collection and analyses processes also are discussed. To address the study's research question, the results of the data analysis are then presented, organized by theme. Finally, a summary is presented that includes a discussion of the results in relation to the original problem identified for this study as well as a solution in the form of a project.

Research Design and Approach

In this section, the qualitative instrumental case study as the research design for this study is defined. Additionally, a rationale for having chosen that design is offered. Finally, a rationale for why other designs were not appropriate for this study is presented.

Rationale for Qualitative Design

Unlike qualitative research based on data that allow for expression of participants' voices, the focus of quantitative research is numerically based data that typically are analyzed to determine specific participant characteristics or identify relationships between variables (Creswell, 2014). The purpose of this study was to explore the perceptions of students who at any time were enrolled in Music Theory I at MDU regarding the challenges of successfully completing the course. In this regard, I was concerned with collecting data about the participants' experiences as expressed in their own voices rather than identifying variables and determining relationships between them. Thus, qualitative research was more appropriate for this study than quantitative research. Likewise, because mixed-method research includes the collection and analysis of both

quantitative and qualitative data (Creswell, 2014), a mixed-method design was less appropriate for this study than a qualitative research design.

Types of Qualitative Research Designs

Numerous choices exist with regard to qualitative research designs (Creswell, 2014). According to Creswell (2014), the most common qualitative research designs in the social and health sciences are "narrative, phenomenology, ethnography, case study, and grounded theory" (p. 187). The differences between these designs are based on the researcher's purpose for conducting the study (Creswell, 2014).

Ethnographic studies are conducted when a researcher wants to explore a particular culture (Lodico, Spaulding, & Voegtle, 2010). Narrative studies are conducted when the researcher wants to use a narrative storytelling approach to data collection and interpretation (Creswell, 2014). Grounded theory is conducted when a researcher wants to develop theory (Lodico et al., 2010). Phenomenological studies are conducted when researchers want to study individuals' experiences and explore the underlying structures of a phenomenon (Lodico et al., 2010). Because this study was a case study, I discuss case studies in more detail in a separate section.

Case Study

Case studies are often used to generate data in clinical settings (Aaltio & Heilmann, 2010; Baxter & Jack, 2008). However, they also are well-suited for qualitative research (Baxter & Jack, 2008), especially in the educational setting (Gagnon, 2010). According to Yin (1994), case studies can be explanatory, exploratory, or descriptive in nature. However, because all qualitative research is inherently descriptive (Kahlke, 2014), tends to be exploratory in nature (Keddie, 2013), and can be driven by descriptive

or explanatory research questions (Yin, 2006), the distinction between these categories may not always be clear (Baxter & Jack, 2008). Ultimately, the purpose of a case study is to gain a better understanding of a topic as it exists in a particular context or natural setting (Yin, 2006)—it is an opportunity to learn about a case (Grandy, 2010).

Case studies also can be described as intrinsic or instrumental (Stake, 2000). A researcher conducts an intrinsic case study when the sole purpose for conducting the study is to better understand the particular case of interest (Stake, 2000). An instrumental case study, which may be focused on a single case or more than one case, is conducted when a researcher is interested in using insight gained about a particular case in order to generalize to other settings (Stake, 2000).

Justification for Choosing Case Study Design

This study may best be described as an instrumental case study. I chose this study design because the goal of this study was to describe the challenges faced by first-semester-music-program students in Music Theory I at MDU (i.e., the case) as a means to better understand lack of student persistence in the course (i.e., the issue). As such, the case was secondary to the purpose of better understanding the phenomenon of lack of student persistence. The specific case in this project study was the MDU Music Theory 1 course, the bounded system of which included the students, instructors, classrooms, and subsequent content. The case was further bounded by student enrollment during the Fall 2011 to Fall 2016 semesters.

Justification for Not Choosing Other Designs

Other research designs were not appropriate for this study. Initially, I did not intend to explore a particular culture, assume a narrative storytelling approach to data

collection and interpretation, or develop theory; therefore, ethnography, narrative, and grounded theory, respectively, were not appropriate choices for this study (see Creswell, 2014). Because a phenomenological design is appropriate for studying individuals' experiences and exploring the underlying structures of a phenomenon, this design might at first have seemed appropriate for this study. However, initially, I had been intending to ask participants to share their perspectives on the experiences of others; therefore, the data I would collect would not have been strictly about people's own lived experiences. Because Merriam (1998) explained that exploring people's own lived experiences is an essential element of phenomenological research, it would not have been accurate to refer to this study's design as phenomenological.

Approach to Data Collection

To collect data in this study, I conducted interviews. Teachers participated in individual interviews, and students participated in both individual interviews and a focus group interview. A thorough discussion of these data collection methods and the rationale for using them is provided in the Data Collection Tools and Processes section.

Participants

In this section, I discuss five topics related to the study participants. The first two topics, a description of the participants themselves and a discussion of the expected sample size, are directly related to the participants themselves. The other three topics are related to procedures associated with data collection: recruiting the participants, establishing rapport with the participants, and protecting the rights of the participants.

Sample Description

Participants for this study were students and instructors. Students were invited to participate in the study if they had been enrolled in Music Theory I at MDU during any fall semester between 2011 and 2016. Students were eligible to participate in the study if they (a) withdrew from the course voluntarily, (b) were administratively withdrawn from the course, (c) failed the course, or (d) passed the course. Students were not excluded from the study if they repeated the course. Further, no students were excluded based on gender, race, or other demographic characteristics. To be legally able to consent to participate in the study, participants needed to be at least 18 years old at the time of data collection. To avoid the collection of repetitive data, students who participated in individual interviews were not allowed to participate in the focus group interview and vice versa. In addition to the students, the two instructors who taught Music Theory I between 2011 and 2016 were invited to participate in this study.

After collecting and analyzing data, I was able to generate an accurate description of the study sample. As shown in Table 2, all students were White. There were almost twice as many male students (63%) as female students (37%), and the majority of students were 18 years old (68%). Considering the age of the majority of the students, it was logical that almost 75% of students reported being only somewhat financially independent. There were almost twice as many music education majors (63%) as there were music technology and bluegrass majors combined (37%). More than two thirds of the students had been out of the course for 3 or fewer years. Almost equal numbers of students had withdrawn (31%), failed (36%), and passed the course (32%).

Table 2

Student Characteristics

Student characteristics	*N*	*n*	%
Major when first enrolled in Music Theory I	19		
Bluegrass		3	15.78
Music Education		12	63.15
Music Technology		4	21.05
Age first time enrolled in Music Theory I			
17 years		1	5.26
18 years		13	68.42
19 years		4	21.05
23 years		1	5.26
Time since last enrollment in Music Theory I			
6 years		3	15.78
5 years		1	5.26
4 years		3	15.78
3 years		7	36.84
2 years		3	15.78
1 year		2	10.52
Gender			
Male		12	63.15
Female		7	36.84
Ethnicity			
White		19	100.00
Level of financial independence			
Financially independent		3	15.78
Somewhat financially independent		15	78.94
Financially dependent		1	5.26
Result of enrollment in Music Theory I course			
Withdrawn (plans to repeat)		2	10.52
Withdrawn (does not plan to repeat)		2	10.52
Withdrawn & repeated and passed		1	5.26
Withdrawn & repeated and failed (not returning)		1	5.26
Failed & did not repeat		3	15.78
Failed & repeated & passed		1	5.26
Failed, withdrawn, repeated & passed		1	5.26
Failed, withdrawn, probation, returning		1	5.26
Failed, withdrawing, returning		1	5.26
Passed		6	31.57

Sample Size

When conducting a study, a researcher must determine an appropriate sample size. This process can be challenging for qualitative researchers (Guest, Bunce, & Johnson, 2006; Marshall, Cardon, Poddar, & Fontenot, 2013) because in qualitative research, appropriate sample size varies according to the study design (Creswell, 2014) and depends on the study's research question, the types of data the researcher collects, the method of data analysis being used, and the resources a researcher has available to him or her (Merriam, 1998). Here, I discuss the various opinions in the literature regarding methods for determining sample size and appropriate sample sizes. I also discuss the actual sample size of the study based on the student and instructor participation data generated through data collection and analysis.

Methods for determining sample size. There is no one definitive method for determining appropriate sample size (e.g., Gall et al., 2007; Guest et al., 2006; Marshall, et al., 2013; Merriam, 1998). Unlike in quantitative studies in which researchers determine the appropriate sample size using a priori analysis before collecting data, researchers conducting qualitative studies are apt to confirm an appropriate sample size during the data collection process (Guest et al., 2006; Merriam, 1998). In general, the number of study participants, locations, or events should be large enough so that a researcher generates enough data to sufficiently answer the research questions developed for the study (Merriam, 1998). When a researcher reaches the point of data redundancy (Lincoln & Guba, 1985) and is able to sufficiently answer the study's research question, the data are considered to be saturated (Guest et al., 2006). Including one (Lincoln &

Guba, 1985) or more participants beyond the point of redundancy may be useful for confirming the accuracy of study findings (Gall et al., 2007).

Sample size for individual and focus group interviews. Typically, sample sizes in qualitative studies are small (Gall, Gall, & Borg, 2007). According to Marshall et al. (2013), a small sample is one that has fewer than 20 participants. When a researcher is collecting data using individual interviews, a sample size of 12 is appropriate (Guest et al., 2006; Onwuegbuzie & Leech; 2007). When a researcher is collecting data using focus groups, a sample size of six to eight is appropriate (Creswell, 2014; Hennink, 2014; Morgan, 2013). With regard to single case studies in general, Marshall et al. suggested that a sample size of 15-30 is appropriate.

Determining sample size in this study. When beginning this study, I planned to cease collecting data when participants no longer were providing new data and the data had become saturated. However, I did need to determine a starting point for inviting participants to take part in my study. Based on the information previously provided in this section, I invited 12 students to participate in individual interviews and six students to participate in a focus group for a total of 18 students.

Because there were four naturally occurring groups of students at MDU who could have participated in this study, a logical choice was to choose three students from each of those groups. Based on this thought process, at the beginning of this study, I planned to invite to participate in my study (a) three students who withdrew from the course (voluntarily or as the result of administrative action) and subsequently changed their program of study to avoid having to repeat the course; (b) three students who failed the course and subsequently changed their program of study to avoid having to repeat the

course; (c) three students who withdrew from (voluntarily or as the result of administrative action) or failed the course and subsequently repeated the course; and (d) three students who passed the course the first time they were enrolled in the course. By deliberately inviting students in these four categories, I made a deliberate attempt to gather data that would represent the broadest spectrum of student perceptions regarding the challenges associated with being a first-semester student in Music Theory I. Being realistic, I recognized that it would not be possible to control who chose to participate in my study and that I might be unable to recruit three students from each of these categories. I also understood that my study would still have value if fewer students in these specific groupings were recruited.

There were only two instructors who met the inclusion criteria for this study. Therefore, a discussion of sample size with regard to saturation of data collected from instructors was essentially pointless. I did, however, invite both instructors to participate in the study and planned to gather data from one or both who agreed to participate.

Actual sample size. Ultimately, a total of 21 people participated in this study: two instructors and 19 students. Of those 19 students, 12 participated in individual interviews, and seven participated in the focus group. There was one more student in the focus group than I had anticipated. Because the student offered to participate and because I did not anticipate that one additional student would result in any notable increase in effort on my part, I allowed the additional student to participate in the study.

Recruiting Participants

Access to student participants was gained with the help of an administrative assistant in the music department at MDU. Upon Institutional Review Board (IRB)

approval to conduct this study from Walden University and MDU, the chair of the fine arts department gave permission to an administrative assistant to forward an email to potential participants on my behalf. After 1 week, the administrative assistant forwarded a reminder email to potential participants on my behalf thanking those who had already participated and reminding those who had not yet participated that there was still time to do so. To encourage students to read the initial and reminder emails, I kept the text in the body of the emails brief and focused solely on inviting students to participate in the study. I included only essential information about the purpose of the study and general expectations of participation.

When potential participants contacted me to join the study, I confirmed verbally or in writing that they met the requirements for participation in the study. Any participants who met the eligibility requirements for participation were allowed to join the study if they chose. Students had the choice to participate in an interview or the focus group.

When students contacted me, I asked about which method of participation they were interested in learning more about, and I explained the specific details related to participation in individual interviews or the focus group as appropriate. If a student was interested in both methods of participation, I explained to the student the details of participation in both the individual interviews and the focus group. I also shared the general information about the study as outlined on the consent form.

On the consent form, I fully disclosed the details of the study. First, I thoroughly explained what the study was about and the purpose for conducting it. Next, I described the procedures for participating in both the individual interview and the focus group

interview portions of the study. I also made statements regarding the voluntary nature of the study, the risks and benefits of participation, the lack of payment for participating in the study, and issues related to privacy. Finally, I provided contact information for both myself and a representative at Walden University.

After explaining the details of the study, I answered any questions students may have had about participating in the study. When all of the questions had been answered satisfactorily, I asked them which consent form they would like me to send to them if any. If they wanted to receive the consent form for both the individual and focus group interviews, I sent them both forms. If, after receiving the consent forms, students determined they wanted to participate in the study, they contacted me again.

When students contacted me the second time, I informed them of my need for participants based on how many open individual and focus group interview positions were available at that time. Students then either decided to participate or declined to participate. If they decided they were willing to participate, I confirmed whether they wanted to participate in an individual interview or the focus group. Then, I either scheduled their interview or reminded them of the scheduled date of the focus group. I accepted the first six students who agreed to be in the focus group and the first 12 students who agreed to be interviewed to achieve my goal sample plus one additional student as described previously in the sample size section.

Instructors also were invited to participate in the study via email. However, because I had access to the instructors' email addresses, it was not necessary to seek the help of the administrative assistant in this regard. Also, because instructors were being invited to participate in the study in only one way, I provided the consent form for

instructors along with the invitation to participate in the study. The consent form for the instructors was similar in structure to the consent form for the students and contained information about the same general topics. However, the details about the reason for including the instructors in the study and the expectations for their participation differed accordingly. Limiting the number of instructors who participated in this study was not a concern because there were only two instructor who were eligible to become participants.

Establishing Rapport

At the beginning of this study, I could not be certain that a positive researcher-participant working relationship with participants who agreed to participate in this study could be established. However, I did put in place a plan for establishing rapport and anticipated that rapport would be established. First, during the initial contact with participants, I planned to review the expectations for the study expressed in the consent form. By reviewing this information, I expected the participants would be reassured of my research competency and professional intentions, which would establish the foundation for a positive researcher-participant working relationship. I planned to continue to develop this relationship by maintaining professional and ethical standards of research while interviewing and otherwise interacting with the participants. I also anticipated that my roles as an assistant professor and the director of the Bluegrass Music Degree program at MDU would contribute to the development of a positive working relationship with participants. Specifically, I expected that my roles at MDU would help participants feel connected to me as someone who would understand their experiences and perceptions and thus comfortable speaking to me about those experiences and perceptions. Finally, I planned to be empathetic to participants during interviews, which

according to Merriam (1998), can help build trust and enhance rapport between the researcher and participants.

When the research was being conducted, I followed my plan for establishing rapport with participants. Specifically, I (a) reviewed the expectations for the study expressed in the consent form, (b) maintained a professional and ethical standard of research while interviewing and interacting with the participants, (c) introduced myself as the director of the Bluegrass Music Degree program at MDU, and (d) remained empathetic to participants during interviews. Based on the outcomes of the interviews, I would describe my efforts to establish rapport with participants as successful. None of the participants appeared uncomfortable or apprehensive, and they all appeared to be forthcoming with their responses. It is feasible to assume that by establishing good rapport with the participants, I was able to collect valuable data to use to answer the research questions posed for this study.

Protection of Human Participants

The protection of participants in this study was ensured in a variety of ways. First, I procured proper permissions to collect data and ensured each participant completed a consent form before any data were collected. In the consent forms, I thoroughly described the study and the expectations for participants. Data collected during interviews were deidentified. I kept one master list of participants' contact information and associated participant numbers, by which I referred to participants in all other recorded and verbal references (e.g., Participant 1, Participant 2, etc.). In addition, I did not use any participants' personal information for any purposes outside of this research project nor include participants' names or any other specific data that could identify them in the

study reports. Also, I kept all data secure in my home. I kept all electronic files on a password protected computer and all hard copy files in a locked filing cabinet. I plan to keep data for a period of at least 5 years following the completion of this study, as required by the university. Finally, I required the peer debriefer and the second coder to sign letters of confidentiality. Although the peer debriefer and second coder did not have access to any data that were not deidentified, because MDU is a relative small institution, it was possible that they might have been able to identify particular students based on the uniqueness of the comments they make.

Data Collection

Before collecting data for this study, I sought appropriate permissions to do so. First, I sought approval to conduct the study from Walden University's IRB. At that time, I possessed a letter of support for my study from the chair of the fine arts department at MDU. Initial approval from Walden University was provisional and contingent on approval from the IRB at MDU. Once approval was procured from MDU (#06-05-17-0461700), I was able to procure final approval from Walden University. Once this process was complete, I began the data collection process.

Data Collection Methods and Rationale

In this exploratory case study, I collected data using individual and focus group interviews. The individual and focus group interview items were based on fundamental ideas presented in the literature related to why students may or may not be successful in college. When appropriate, these ideas were tailored to fit the music education program and Music Theory I course settings. In this section, I discuss in general the individual and

focus group interview as data collection methods. Then I discuss the rationale for using these methods in this study in particular.

Individual interviews. Individual interviews are useful when a researcher wishes to collect in-depth data about a participant's experiences or perspectives related to a specific topic/issue (Mack, Woodsong, MacQueen, Guest, & Namey, 2011; Turner, 2010) and are appropriate for use in a case study (Stake, 2000). During individual interviews, a researcher has the time to conduct an extensive exploration of the details of a participant's experiences or perspectives (Mack et al., 2011). The use of open-ended questions in interviews provides structure for the data collection process while at the same time allowing the researcher the flexibility to adjust the flow of the discussion based on areas of interest uncovered during the interview (Gall et al., 2007). This process, although beneficial, is dependent on the researcher's ability to be able to think quickly and without structure (Gall et al., 2007). Practicing the interviewing process can help researchers master this skill and promote the generation of quality interview data (Gall et al., 2007).

Focus groups. Like individual interviews, focus group interviews are used to collect in-depth data on a topic that researchers can use to understand an issue related to that topic (Creswell, 2014; Hennink, 2014), although time constraints typically impede the collection of extensive details about individual experiences or perspectives (Morgan, 2013). Also, in a group setting, participants may be reluctant to share extremely personal experiences so that the data collected typically provide a broader perspective of a topic/issue (Mack et al., 2011). However, in conjunction with other qualitative data

collection methods, the use of focus groups helps researchers collect data that support a complete understanding of a topic/issue (Mack et al., 2011).

One major benefit of using a focus group to collect data is that it is time effective (Hennink, 2014). In a focus group interview, a researcher can collect a wide range of data from a number of people all at one time (Hennink, 2014; Mack et al., 2011). However, focus group interviews are unique in that they typically are less structured than individual interviews (Morgan, 2013), which promotes focus on aspects of the topic/issue most relevant to the participants (Hennink, 2014) and can lead to the exploration of aspects of the topic not previously considered by the researcher (Morgan, 2013).

What most notable factor that distinguishes focus group interviews from individual interviews is the capacity for participants to interact and share ideas and differing perspectives with other participants (Hennink, 2014). The sharing of ideas and perspectives among participants in a group setting of this nature promotes interactive discussions that support a synergetic group dynamic among the participants (Lodico et al., 2010; Mack et al., 2011). When participants engage with one another in this way, they are likely to share their reasoning and provide rational for their perspectives to a greater degree than they would during an individual interview (Hennink, 2014). This means that focus groups can be useful not only for generating data about what people think but also why they think what they do (Morgan, 2013).

Participants also are more likely to influence each other's perspectives and the degree to which participants share their experiences and perspectives (Mack et al., 2011). In this way, a focus group is a means of providing a group of participants a platform for reaching a consensus regarding the meaning they apply to a particular concept or event

(Nel, Romm, & Tlale, 2015). Focus groups, in conjunction with other qualitative data collection methods, can help researchers develop a complete understanding of a topic/issue (Mack et al., 2011).

Focus groups are most effective when participants share a common background and have a personal interest in the topic/issue being discussed by the group (Morgan, 2013). In exploratory research where researchers are interested in participants' perspectives, a less structured style in which the participants are allowed to focus on details that are important to them is especially useful. (Morgan, 2013) It is less useful to structure the discussion around preconceived expectations for participant input (Morgan, 2013).

Rationale for using interviews in this study. Initially, I considered the rationale for using individual interviews to be straightforward—the data collected using individual and focus group interviews would allow me to thoroughly answer my research question. The use of individual interviews allows researchers to collect in-depth data about a participant's experiences or perspectives related to a specific topic/issue (Mack et al., 2011; Turner, 2010). In this case, the specific topic of interest was the challenges to success in Music Theory I. Therefore, I anticipated that using individual interviews would allow me to collect in-depth data about participants' perspectives regarding the challenges to success in Music Theory I. These perspectives would help me understand the challenges to success student faced in Music Theory I and thus help me answer my research question.

Originally, I rationalized that using focus group interviews would allow me to take the role of moderator and allow participants to direct the flow of the conversation.

Morgan (2013) and Nel et al. (2015) suggested that open-ended and general prompting questions encourage participants to bring up topics or issues they find most important to them. In this study, I did not assume to understand what was important to participants based on my potentially preconceived expectations developed after reading the literature or from my own personal experiences. Rather, I used open-ended and general prompting questions to encourage participants to bring up topics or issues that were most important to them. I rationalized that using this unstructured format for conducting the focus group interviews would allow me to collect data about what students perceived to be important to know about Music Theory I. Further, I made two logical assumptions. First, I assumed that they would discuss, on their own, topics related to the challenges to success in Music Theory I that would help me develop a complete understanding of the challenges to success faced by students' in Music Theory I. Second, I assumed that if they did not bring up specific topics I perceived to be of value to the discussion, such as instruction and teaching style, the students could be prompted to discuss these topics.

The choice to use interviews was confirmed as a logical one when I began to collect the data for this study. By using open-ended questions in the individual interviews, I was able to collect in-depth data about participants' perspectives regarding the challenges to success in Music Theory I. I also was able to collect in-depth data about participants' perspectives regarding the challenges to success in Music Theory I by using general prompting questions and acting as a facilitator in the focus group interviews.

Data Collection Tools and Processes

To collect data during the individual and focus group interviews, I used self-developed interview protocols. The protocols for the individual student and instructor

interviews differed slightly from each other. In addition, the protocol for the individual student interviews differed from the protocol for the student focus group interview. In this section, I discuss the details of these data collection tools as well as the processes for collecting data.

All of the interview protocols included structured dialog for greeting the participants, reviewing the expectations of study participation, and expressing my appreciation for their participation. All of the interview protocols included items related to the student challenges to success in Music Theory I at MDU, the focus of this study. The protocol for the individual student interviews and the focus group interview included the collection of background items to document student characteristics. To maintain participant privacy, I supplied participants in the focus group with a piece of paper and asked them to write down their information.

All the interview items were semistructured/open-ended so that I could have the capacity to prompt participants for additional information and to explore new ideas participants might have introduced into the discussion when appropriate. The items developed for the interviews helped me generate data appropriate for answering the research question posed for this study. The individual student interview protocol, the individual instructor interview protocol, and the focus group interview protocols are presented in Appendixes B, C, and D, respectively.

At the beginning of this study, I planned to arrange interviews at mutually convenient times for both the participants and myself. For participants who were not able to meet with me in person on campus for the individual interviews, I intended to conduct interviews via phone or Skype. I planned to conduct on-campus interviews in a quiet and

private study area in the library or other public campus building. Instructors were able to request to conduct the interviews in their office spaces. I expected to conduct the focus group interview on campus in a quiet and private study area in the library or other public campus building.

Ultimately, I conducted all of the interviews in person during normal business hours. Individual interviews took place in the recording studio lab in the fine arts building. The focus group took place in a classroom in the fine arts building.

Initially, I anticipated that the individual interviews would last approximately 45 minutes and that the focus group would last approximately 75 minutes. Also, I planned to digitally record all interviews with consent of the participants. I planned to conduct interviews over the course of 3 weeks, or fewer if data saturation was reached sooner than expected.

Ultimately, only one student interview and one instructor interview lasted 45 minutes. The other 11 student interviews and the other instructor interview lasted 30 minutes or less. The focus group lasted just over 1 hour. All participants consented to being digitally recorded. Data collection lasted 2 weeks. I collected data for fewer than the planned 3 weeks because I was able to schedule all of the individual interviews and the focus group interview during the first week and conduct the interviews during the second week. Although I perceived I had reached data saturation after conducting the focus group interview and 10 individual interviews, I completed the remaining two interviews as a courtesy to the students who had agreed to participate in the study. All of the participants appeared to be excited to share their experiences with me, and I decided

that, because having additional data would not be detrimental to the study outcomes, I would continue with data collection after reaching data saturation.

Originally, I planned to digitally record all of the interviews and to take notes during the interviews. However, because I did not want the participants to interpret my note taking as lack of interest or for them to become focused on or distracted by my notetaking, I planned to keep my note taking to a minimum. To do that, I planned to record only (a) incidents of participant body language deemed helpful for interpreting the data, (b) initial insight with respect to potential coding schemes, categories, or themes; and (c) topics of interest brought up by the participant that I wished to explore subsequently during the interview. So that my note-taking capacity was not predetermined and limited by taking notes on the actual interview protocol, I planned to use a lined note pad to take notes.

During actual data collection, I did not use a lined note pad to take notes as intended. Rather, I jotted down notes directly on the interview protocols, which was more convenient than using a note pad. However, as an inexperienced researcher, I found it challenging to concentrate on what the participants were saying while simultaneously taking notes. Therefore, although I did note that *students need help* and that the *material is challenging*, generally note taking occurred only when students shared information about their music and music theory backgrounds. By limiting my noting taking, I could better keep the discussion topics in focus and frame my prompts and follow-up questions in a way that were most applicable to each students' unique situations. By limiting my note taking, eye contact with the participants could be maintained, a condition I perceived to be beneficial for developing rapport with the participants.

Consent to Participate

No data in this study were collected from any participants without their consent. Because I was unsure about students' physical availability, I expected to conduct a number of interviews over the phone and via Skype. Surprisingly, I was able to conduct all of the student interviews face-to-face; however, I did conduct both teacher interviews over the telephone. All of the students who participated in individual interviews brought signed copies of the consent form with them to the interviews. All of the students who participated in the focus group interview signed the consent from immediately before the focus group interview began. The two instructors who participated in the study delivered their signed consent forms to me in my office prior to their scheduled phone interviews.

Organizational Plan for Data Collection

To keep the interview data organized during data collection, I planned to label all record keeping and data collection documents with the participants' assigned participant number. I also intended to keep data for each participant in a separate manila folder. During the data collection process however, I did not need separate manila folders for each participant because there was nothing to organize other than the interview protocols on which I took my notes. Also, I kept all of the consent forms together in a separate folder.

Role of the Researcher

As the primary researcher in this study, I was responsible for all aspects of data generation, collection, and analysis and for the final presentation of the study results. At the time of the study, I was employed at MDU. Since fall 2011, I had been an assistant professor and director of the Bluegrass Music Degree program. As such, the potential

instructor participants had at some point been my colleagues and some of the potential student participants may have been students in my classes or they may have been members of the bluegrass band I directed. However, at no time during this study was any potential participant in a position subordinate to me in any way. So although it was possible that potential participants agreed to participate in my study because they knew me, at the beginning of this study, I did not anticipate that anyone would feel obligated to participate. Nonetheless, in the section of the consent form pertaining to the voluntary nature of this study, I included an additional statement urging participants to disregard their prior knowledge of me when considering whether or not they wanted to participate in the study. Also, I reiterated the voluntary nature of the study when speaking to potential participants to schedule interviews and again in the introductory dialog of the interview protocols.

Participants also could have been biased in their responses during the interviews in an effort to help me as a researcher. However, this scenario was highly unlikely. In the introductory dialog of the interview protocols, I stressed the importance of being honest. Although I knew in advance that the majority of participants in this study would be young adults, I did anticipate that they would be mature enough to understand the need for honest responses in this study and, therefore, that they would be honest.

Because qualitative research focused on a particular organization or establishment may have political ramifications for participants (Merriam, 1998, there was potential that in this study, the instructor participants in particular might have felt uncomfortable sharing views that may depict the college or the music program as deficient in any way. The inclusion of only two potential instructor participants could have contributed to this

scenario because the ability to keep instructor responses confidential was admittedly limited. However, as mature adults and educators, I anticipated that the potential instructor participants would understand the importance of being honest in their interview responses and decline to participate in the study if they were to have foreseen any conflicts of interest in this regard.

As an assistant professor and the director of the Bluegrass Music Degree program at MDU, I was a stakeholder in the success of students in the music program. Because I had a vested interest in their success, I was inherently biased with regard to the need to identify challenges to success faced by these students. Although this condition was true, as a professional educator and an ethical researcher, I understood the need to be unbiased with regard to the generation, collection, analyses, and presentation of data as suggested by Creswell (2014). Borrowing terminology from Husserl, Moustakas (1994) described the process of avoiding bias during research as the *Epoche*. In this sense, researchers are urged to consciously disregard their own "perceptions, preferences, judgments, [and] feelings" (p. 89) so that a true representation of the data can be achieved. During all aspects of this study, I consciously worked to achieve Epoche as thus avoid the introduction of researcher bias in this study.

Data Analysis Plan

In this study, I collected data using both individual and focus group interviews. Because this study was exploratory in nature and the purpose was to develop a rich description of the challenges to success faced by first semester students in Music Theory I at MDU, all data, regardless of whether they were collected during individual or focus group interviews and including those that appeared to be discrepant, were included in the

data analysis processes. I describe these processes here. Also, I discuss the means by which evidence of quality is demonstrated in this study.

Processes for Analyzing Data Described in the Literature

Options for analyzing interview data are numerous (Creswell, 2014; Merriam. 1998; Saldaña, 2009; Tesch, 1990). Although some researchers and methodologists have suggested that particular styles of analyses are appropriate for particular research designs (Creswell, 2014), essentially, the focus of the majority of styles is on inductive analysis (Mertler, 2016) through the coding of data. The purpose of coding data is to reduce the quantity of raw data (Richards, 2015) into concepts, typically expressed in the form of themes (Lichtman, 2013), so researchers may better make sense of it (Creswell, 2014).

Despite slight distinctions between the various data analysis methods, researchers consistently recognize three basic steps: coding, categorizing, and conceptualizing (see Creswell, 2014; Merriam, 1998; Saldaña, 2009). "A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for a portion of language-based or visual data" (Saldaña, 2009, p. 3). During the coding process, the researcher identifies characteristics, or coding schemes (Mertler, 2016), that can be applied to units of data; those units can be single words, phrases, or complete sentences (Merriam, 1998).

Next, during the categorizing process, the researcher organizes the coded data into categories, which may become apparent based on the number of related coded schemes, because of a noted relevance of the category to the study's stakeholders, because of the uniqueness of the category, or because of its novel contribution to addressing the research problem (Merriam, 1998). The categories should be closely related to the study's focus,

thorough enough to include all the relevant coding schemes, unique so that no overlap between categories is possible, expressive of the content it describes, and conceptually similar in nature (Merriam, 1998).

Finally, during the conceptualization process, the researcher groups the categories into themes (Creswell, 2014; Merriam, 1998; Saldaña, 2009). Themes are patterns the researcher observes among the categories (Merriam, 1998; Saldaña, 2009). Researchers use these conceptualized themes to help answer their research question or questions (Creswell, 2014).

Processes for Analyzing Data Used in this Study

To analyze the interview data in this study, I followed the three basic steps for analyzing qualitative data outlined here: coding, categorizing, and conceptualizing. Before beginning this process, however, it was necessary to transcribe the data. I transcribed the data verbatim myself manually. After transcribing the digital recordings, I reviewed the recordings and transcriptions a final time in their entirety to check for accuracy. Then, I read through the data in its entirety in order to get a feel for the data as a whole as suggested by Tesch (1990). In addition, as suggested by Merriam (1998), I recorded initial insight while conducting the interviews and considered that insight during the coding, categorizing, and conceptualizing processes, although these notes were minimal.

During the data coding process, I planned to use hard copies of the interview transcripts and different colored pencils to distinguish each unique code (see Mertler, 2016). According to Saldaña (2009), researchers seldom get the coding and categorizing processes correct on the first attempt. Therefore, during the categorizing process, I

planned to cut apart the transcripts and physically group the coded data strips into appropriate category piles labeled with index cards (see Mertler, 2016). This process would allow me to reorganize the data and categories quickly and easily as needed until I was satisfied the data were categorized appropriately. During the conceptualizing process, I planned to develop themes, record them on an Excel spread sheet, and list the related categories in adjacent cells. This process would provide me a visual representation of the data, which would help me identify possible subcategories within the themes (see Merriam, 1998; Saldaña, 2009). After analyzing the data, I would use the data to answer my research question. I planned to present my findings in narrative form organized by theme.

However, when beginning to analyze the data, I realized that my original plan for handling the data during the coding process was not working for two critical reasons. First, as the coding process advanced, I began changing my mind about my plan for coding particular bits of data. When this situation occurred, I had to use a black marker to cover up the original coding color and then remark the data with a new color. As a result, the color coding became messy, and as I continued with this process, it became increasingly more difficult to quickly distinguish which bits of data were coded with which color scheme. Second, I found that some data fit into more than one category. This meant that I would need to copy particular pages a second time in order to generate an additional paper strip.

After abandoning my original plan for processing data, I decided to code and categorize the data digitally. To code the data, I used the highlighting function in Word. Then, to categorize the data, I copied and pasted the bits of data into a separate Word

document under appropriate headers I developed as the categories became apparent. If I determined a bit of data was appropriate for more than one category, I was able to quickly and easily paste that text in a second category location in the document. Ultimately I decided that the categories themselves represented appropriate themes and no further higher-level grouping of the data was conducted although I did note that certain themes were categorically similar. Digitizing my data analysis process helped me efficiently make sense of the large quantity of data I had collected.

Evidence of Quality

When conducting a qualitative study, a researcher should be concerned with generating credible findings that are confirmable and potentially transferrable to other settings (Guba & Lincoln, 1985; Lincoln & Guba, 1985; Merriam, 1998; Mertler, 2016). Evidence of such quality in this study was established in a variety of ways. I demonstrated that my findings were credible by using well-developed data collection instruments and triangulating my data. I demonstrated that my findings were confirmable by conducting member checking and showing intercoder reliability. I ensured that my findings were transferrable by promoting reader understanding using peer debriefing.

Credibility. To ensure that my study findings were credible, I triangulated my data. Although the idea of triangulating data is commonly associated with quantitative research, triangulation with respect to demonstrating credibility of qualitative findings has been established since at least 1966 (Guba & Lincoln, 1985). Triangulation refers to the collection of at least two data collection methods or sources of data (Flicke, 2003), a process that can be used to converge (MacNealy, 1999) and corroborate multiple views on a topic (Gall et al., 2007) for the purpose of demonstrating the validity of study

findings (Flicke, 2003; Merriam, 1998). According to Guba and Lincoln (1985), conclusions researchers draw from any one data source are inherently weaker than conclusions drawn from data that are triangulated. It is likely that for this reason, triangulation, according to Creswell (2014), is one of the easiest and most often used methods for establishing credibility of findings in qualitative studies. By including in my study data collected using individual and focus group interviews, and data from both students and instructors, I anticipated not only being able to demonstrate a thorough understanding of the challenges to success faced by first semester students enrolled in Music Theory I at MDU but also being able to improve the accuracy and trustworthiness of my findings with regard to student completion of Music Theory I at MDU. If all of the data resulted in similar findings, I would feel confident that my findings were credible. As demonstrated in the subsequent thematic discussion of the data, all of the data resulted in similar findings, and thus I feel confident that my study findings are credible.

Confirmability. To demonstrate that my findings were confirmable (i.e., accurate), I conducted member checking with the participants I interviewed. During this process, I sent my preliminary findings from the interviews to the participants and asked for their feedback regarding the accuracy of my findings. I planned to make adjustments accordingly based on their feedback. However, no participants sent feedback, and thus no adjustments were made in this regard.

I also demonstrated that my findings were confirmable by showing intercoder reliability with regard to my findings. According to Merriam (2002), researchers use inter-coder reliability to generate evidence of the validity of his or her conclusions and the extent to which those conclusions are realistic. This concept is similar in nature to

interrater reliability, which, in its most general sense, refers to the extent of agreement between different raters with regard to a particular observed event or phenomenon (Trochim, 2006). However, while interrater reliability typically is based on a measurement scale of some sort (Stemler, 2004; Trochim, 2006), intercoder reliability is based on the agreement between coders with regard to the codes generated while analyzing qualitative data (Merriam, 2002).

To determine intercoder reliability in this study, I recruited a second coder to code an estimated 10% of the transcribed interview data, but no less than five and no more than 10 pages. Experts in the field have suggested that 80% agreement between coders represents a good estimate of reliability for qualitative data (Creswell, 2014). Following this guideline, I considered 80% agreement in coding concepts as evidence of coding reliability in this study.

After reviewing the data I provided, the second coder identified three themes (see Appendix E). The first theme was related to students' lack of preparation. The second theme was related to the potential for conflicts associated with the curriculum. The third theme was related to the need for student help. These concepts aligned well with the themes I had developed, which are described in a subsequent section. However, because all three themes the second coder identified were concepts that emerged during my data analysis as well, I considered our agreement to be close to 100%. In this regard, the second coder helped demonstrate confirmability in my study.

Transferability. Although the purpose of qualitative (i.e., descriptive) study was not to generalize data to other settings (Creswell, 2014; Merriam, 1998), I made certain that my findings were transferrable. In this sense, I ensured that readers could identify

with the topic and setting so that the findings of this study were both understandable and valuable. Creswell (2014) has used the term *resonate* to refer to this connection between a reader and the essence of the accounts presented in a researcher's discussion of qualitative findings. Clear and thorough descriptions of data collection and analyses processes are vital to ensuring transferability in qualitative studies (Merriam, 1998). The use of "rich, thick description" (Creswell, 2014, p. 202; Merriam, 1998, p. 211) can be valuable for promoting a sense of shared experiences between the reader and the elements presented in the study discussion.

I also determined that using a peer debriefer might help me to present my findings in a way that promoted a connection between the reader and the study and thus supported transferability. During peer debriefing, a researcher reveals his or her thoughts processes to someone outside of the study so that the debriefer may analyze aspects of the study process that otherwise would not be considered or reviewed (Lincoln & Guba, 1985). The debriefer serves multiple purposes.

One purpose of the peer debriefer is to encourage thorough consideration of appropriate methodological alternatives to those the researcher has chosen (Lincoln & Guba, 1985). Another purpose of the peer debriefer is to question potential researcher bias regarding the study's content or methods or any legal or ethical considerations associated with the study (Lincoln & Guba, 1985). An additional purpose of the peer debriefer is to provide feedback regarding developing hypotheses and help the researcher identify and reconsider hypotheses with weak or no support (Lincoln & Guba, 1985). Similar to the idea of sharing developing hypotheses, Lodico, Spaulding, and Voegtle (2010) suggested a researcher share his or her field notes with debriefers. A final purpose

of the peer debriefer is to serve as a source of emotional catharsis for the researcher and by doing so, enable the researcher to maintain the stable emotional and psychological perspective necessary for conducting quality research (Lincoln & Guba, 1985). Creswell and Miller (2000) have described the process of debriefing in more general terms, referring to the process as one in which someone familiar with the study topic reviews the data and provides feedback (Creswell & Miller, 2000). More recently, Creswell (2014) spoke even more generally about peer debriefing when he referred to the process as one by which a reviewer interprets the study and poses questions that can help the researcher develop a final product that resonates with the reader.

The role of the peer debriefer is best fulfilled when it spans the course of the entire study (Creswell & Miller, 2000; Lincoln & Guba, 1985). However, when writing this study, I was a doctoral student. Therefore, I was unable to incorporate a peer debriefer into the study until after receiving IRB approval from both Walden University and MDU. This means that the peer debriefer did not have the opportunity to provide timely feedback regarding the methodological choices I made for this study nor to identify potential ethical, legal, or other substantive issues that may have been evident during the development of this study.

Lincoln and Guba (1985) have discouraged a student's use of committee members as peer debriefers. Although I have not recognized my committee members as such, they have, essentially, filled this role in this regard by guiding the development of the study's methodology and discussing ethical and legal concerns associated with my research design and approach. However, I was able to employ a peer debriefer during the final stages of my research.

Peer debriefers at best should be familiar with the topic under study or at least familiar with the research process (Creswell & Miller, 2000). The peer debriefer in this study was the chair of the fine arts department at MDU. Lincoln and Guba (1985) discouraged the use of a superior in the role of a peer debriefer to avoid the potential that the researcher interprets the feedback as a mandate for change rather than as a suggestion for change. However, because the role of the peer debriefer with regard to potential input for this study was limited, I did not anticipate the need for concern in this regard when originally approaching him to fulfill this role. The chair of the fine arts department was otherwise well-suited for this role; he was a person with extensive knowledge of the music program at MDU and, because he had a vested interest in my study outcomes, I anticipated he was likely to take the role seriously and provide valuable feedback.

During the final stages of this study, the peer debriefer did establish himself as a valuable resource. First, the peer debriefer served as a means of personal catharsis. As a doctoral student, I understand firsthand the frustrations associated with conducting research. Having a peer debriefer with whom I could share my frustrations and concerns was an effective way to keep myself focused on my work and motivated to complete it.

The peer debriefer also served as a preliminary audience for my findings. Lodico et al. (2010) suggested that a researcher meet with his or her peer debriefer on a regular basis. However, because my opportunities to work a peer debriefer in my study was limited to sharing my findings during the final stages of my research, I shared my findings at three critical stages, (a) immediately following the completion of data collection when beginning to form initial ideas about the data, (b) prior to submitting preliminary findings to the participants for member checking, and (c) after making final

adjustments to the findings, in part based on feedback collected during the member checking process. At each of these critical points, the peer debriefer provided positive feedback about my work, confirming the logic of my analyses and the connections I made between the study results and both the literature and the conceptual framework.

Data Analysis: Thematic Discussion of Results

Data in this study were generated using individual and focus group interviews. All interviews were digitally recorded. Prior to data analysis, all digital data were transcribed and saved as electronic Microsoft Word documents. Then I coded the data using initial and axial coding. Sample pages of the coded data organized by category are presented in Appendix F. An outline of the final thematic structure of the coded data is presented in Appendix G.

The discussion in this section represents my interpretation of the data, which was confirmed by feedback from the second coder (see Appendix E). No feedback from participants was received for consideration, nor did the peer debriefer provide any feedback that prompted changes in my initial findings. Therefore, no changes to the initial findings were made based on solicited feedback. Triangulation of the data and the use of member checking, a second coder, and a peer debriefer helped ensure the quality of the data analysis in this study.

The research question posed for this study was “What are the challenges to success faced by students enrolled in Music Theory I at MDU?” Seven distinct themes aligned with this research question emerged from the study findings. The first three themes, lack of preparedness for college poses a challenge to success in Music Theory 1, lack of appropriate effort poses a challenge to success in Music Theory 1, and student

characteristics pose challenges to success in Music Theory 1 represent concepts related to the student themselves. The second three themes, curriculum and quality of course instruction pose challenges to success in Music Theory 1, class schedule and speed pose challenges to success in Music Theory 1, and class environment poses a challenge to success in Music Theory I, represent concepts related to the college itself. The seventh and final theme was students perceive feasible solutions exist for overcoming the challenges to success in Music Theory I.

Many of these themes are inherently reflective of students' struggles to transition to the college setting. All salient data have been included in this thematic analysis. No data were considered discrepant, and all student perspectives are reflected in the findings presented here.

Theme 1: Lack of Student-Related Factors Pose Challenges to Success in Music Theory 1

The first theme that emerged was that student-related factors pose challenges to success in Music Theory 1. The data showed students' lack of preparedness for college posed challenges to their success in Music Theory 1. Lack of preparedness was described in relation to four different concepts. Two concepts were academic in nature. The other two concepts were personal in nature.

The first way that participants described lack of preparedness was in relation to academic preparation. Instructors perceived that students were not prepared overall academically or with regard to Music Theory I in particular. Although two students did express that they had some background understanding of music theory concepts, the majority of students not only described themselves as unprepared with regard to Music

Theory I but they described other students as unprepared as well. Examples of student statements demonstrating their own unpreparedness include

- "Yeah I think the AP class in high school would have helped out a lot."
- "I suppose there was some stuff that I should have known from high school and just didn't. I wasn't taught it."
- "I think I was lacking a background from the beginning. I just felt like I was behind everyone from the beginning."
- "I think I could have done a lot better if I would have known something beforehand."

About other students' lack of preparedness, one student said others likely struggle because they're "probably not appropriately prepared". Another said that "some people just had a hard time grasping different keys . . .not just keys but different clefts, like treble and bass."

The second way that participants described lack of preparedness was in relation to the difficulty of the material. Some students expressed that they had had some experience with certain topics prior to enrolling in the course, which helped them in the beginning of the course but that as the class progressed, the material became more difficult for them. Other students expressed that they had found the material difficult from the beginning of the class. Examples of student comments that support these statements include

- "I had an A up until we got to things like roman numeral analysis, I knew nothing about that and it was really confusing for me especially being the first time."

- "I thought, I can do this- I know what I am doing. Nope, I didn't at all. I had no idea what I was doing."
- I guess it was the fact that maybe I didn't understand everything in detail. At the beginning it was learning the majors, minors, and I just didn't grasp it like I should have."
- "It wasn't like some of my other classes. It's just like, I was lost about everything."
- "It was like learning a new language for me. It was just as hard when I got to the next phase of it. . . . as it was as doing college algebra. It was difficult."
- "When it came to understanding beats and note value I wasn't able to count very well so I struggled."

Many students also made statements to this effect with regard to their classmates. One student said, "There were people who were just, couldn't pick it up because they were confused by the material." Another student commented, "well, there were some students that straight up couldn't get it."

The third way that participants described lack of preparedness was in relation to lack of understanding of expectations at the college level. Two students described their lack of understanding of expectations as "a culture shock." Other students said

- "It was so different than anything I had ever known before. . . . I just didn't understand that it was that complex."

- "I kind of underestimated how challenging it would become because I really, I really didn't know what to expect . . . I think I personally just underestimated the level of what I would be learning in that sense."
- "If I would have known what I was getting myself into, I probably would not have done a music degree."

The fourth way that participants described lack of preparedness was in relation to lack maturity with regard to personal responsibility. One instructor perceived that students' lack of maturity, specifically with regard to getting themselves to class on time, was the result of their lack of direct adult supervision. Students made similar comments about their own capacity to be responsible on their own and to get to class on time:

- "But it's like, coming to college you don't really have someone to direct you on what to do and when."
- "Because waking up that early, yeah high school does that, you get up that early to go but you have mommy to wake you up. Not here, you have to wake yourself up."
- "I didn't really get a working alarm clock until I got this phone. And, uhh… it… my alarm clock just wouldn't wake me up. It wasn't loud enough."

Other students made direct statements about themselves, such as "it is a maturity thing," "it was a whole maturity thing," and "You have to be a little more mature in order to pass it. If you go in there with a mindset of a high school student, you are going to fail it." One student also made a direct statement about maturity with regard to other students. Another said "they just weren't taking it serious." In some cases, the lack of maturity and

seriousness about school was associated with indulgence in recreational activities. About this, students said

- "They [students] get into its a lot more distractions here."
- "Majority of freshman think and act like, I'm going to college, I'm on my own. . . . I can party all the time. They don't care about class."
- "The girl who would like to partake in extracurricular activities was normally hungover. One time she was actually still intoxicated from the night before."

Theme 2: Lack of Appropriate Effort Poses a Challenge to Success in Music Theory 1

The data showed students' lack of appropriate effort posed challenges to their success in Music Theory 1. Most comments students made about their own lack of effort were related to their failure to get help when they needed it. All students indicated that help was available in some form if they had wanted it. As one student stated, "It's really easy to get help if you need it." Some students referred to getting help but did not indicate from whom they should have gotten it. Most students clearly stated that they should have gotten help from instructors during and after class, and during private lessons; tutors; other students; and online sources. Students who did not seek help often stated that they had wanted to be able to succeed on their own. One student described himself as stubborn and said, "At the time I didn't really want to ask for help, and I wanted to do it all on my own." She also stated that she hadn't wanted to bother the instructor: "I thought, I can figure this out. I just have to figure it out without bothering anyone." Students also perceived that other students had similar reasons for not seeking help. One student said, "I guess in some cases it could be a pride thing." Another student said, "There are some

people who are just stubborn, and they don't want to help." Instructors also indicated that students failed to get help when they needed it.

Although most comments students made about lack of effort were related to failure to get help, some students also indicated that they did not put forth the effort they should have with regard to doing their homework. One student said, "Not doing it is like the reason I failed the first time. I just didn't do any of the homework." One instructor wondered "why they are just not doing it." Students were also aware that other students did not put forth the necessary effort with regard to homework. One student noted, "there was a couple of students who were like 'ha, I didn't do my homework again, ha ha ha.'" Some students noted that other students didn't study. One student said, "The majority of the people that I hung out with that didn't pass didn't study."

Students also made general comments about their lack of effort. One student explained that he failed the course the first time because he "didn't note take at all." Another explained that her lack of effort initially resulted in the need later on "to get caught up to speed." Students also recognized lack of overall effort in their classmates. Examples of student statements supporting this claim include

- "He just didn't put forth the effort. . . . I don't think he prepared [for the test] at all."
- "They were drinking and partying instead of trying to do their homework. . . . the majority was because they were doing stupid stuff instead of work."
- "There was [sic] people who had like no dedication."

Theme 3: Student Characteristics Pose Challenges to Success in Music Theory 1

The data showed student characteristics posed challenges to their success in Music Theory 1. One student characteristic identified in the data was student attitude. Indirectly, two students implied that other students may not have the positive attitude toward the course necessary to do well. One student said, "You should feel happy to wake up and to be able to do what you do every day." The second student said.

> I think that's a lot to do with [Music] Theory 1. It's like . . .yeah, there is the 8 a.m. and like . . . coming in not knowing anything you kind of have to have that passion and dedication and drive to want to pursue it and learn it and get your ass in gear to get it done. You shouldn't have to make yourself want to go to class that is based in your area.

Another student indicated that when students do not do well, they may become discouraged, which can further impact their poor performance.

Other characteristics students expressed that posed challenges to their success were more uniquely personal in nature. One student indicated that she was a slow test taker and could never finish the tests in the allotted time. Another student suggested that she had cognitive difficulty processing multi-step tasks. Another student was enrolled in 18 credits for the semester and expressed that the work load became a struggle for him. Two students described themselves as hands-on learners who struggled with theoretical material that was not conducive to this type of learning. Two other students made statements that demonstrated their lack of confidence, which in turn kept them from asking questions and getting help when they needed it. One student said, "I didn't ask as much questions about nothing either, because . . . it would have defiantly slowed the class

WAY down. . . . I just didn't want to slow the entire class down for everybody else." The other student indicated that she had observed students snickering at other students when they asked questions, so she chose not to ask questions in order to avoid being the focus of other students' unwelcome and negative attention.

Theme 4: Class Schedule Poses Challenges to Success in Music Theory 1

The data showed that the class schedule posed challenges to success in the course. Although one student did comment that the number of classes students were expected to attend was unreasonably high, the remainder of students who commented about the class schedule did so with regard to the 8 a.m. start time for the class. Examples of student comments that support this claim include

- "It already sucked that we had to be up so early in the morning and you had to drag yourself there [to class]."
- "The challenging part was getting my butt out of bed pretty much."
- "I feel like a lot of the problem was the class time. . . . waking up is hard for me."
- "And as far as time. You barely get time to be woke up and you get thrown all these questions. Yeah, time in the morning… it was rough."

The majority of students also indicated that the early start time for the class was problematic for other students as well. Examples of student comments that support this claim include

- "Waking up at 8am. That was the number one challenge for everyone."
- "A lot of people just don't want to get up. Some people struggle."

- "Well I know one guy kept skipping so much that he finally slept in the classroom so he wouldn't miss anymore. He was afraid he would get kicked out. No, like Dr.X saw him walking down the hallways with a pillow and a blanket at like 7:45am."
- "Not waking up on time because it's so early is something that I have noticed being a reason that a lot of students fail it."
- "I've noticed that people who have flunked it can't wake up."

Although instructors understood the logistical reasons for scheduling Music Theory I so early in the morning, they also recognized that students struggled to get to class on time.

Theme 5: Speed at Which the Course is Taught Poses Challenges to Success in Music Theory 1

The data showed that the speed at which Music Theory I is taught posed challenges to success in the course. Almost 25% of the students indicated that the instructor moved more quickly through the material than they would have liked. Examples of student statements that support that claim include

- "I feel like it should have been taken a little bit more of a slower pace."
- "Sometimes it feels just like a big rush."
- "They went . . . I don't know . . . just too fast for me."
- "I think if it would have gone slower, I would have understood it more. Right about the time I got a grasp on it, they moved on."
- "I think the class went too fast for me. I was behind on the first day."

Many students also recognized that their classmates struggled with the speed at which the course was taught. One student commented, “Well from what I hear from people, I’d have to say a lot of people complain that there is a lot of homework with little time to do it.” Another student said, “The other thing people complain about is probably how fast the class went. Not everyone can catch on that quick.”

Some students also recognized that the speed of course was inherently linked to the course curriculum. One student commented, “I wouldn’t say it would be a teacher wise thing, but the only way I see that is just how fast he moves because everything does need to be taught. So I guess it’s more of a curriculum thing.” Another student said, “To get through all of that material . . . It’s crazy sometimes.”

Theme 6: Class Environment Poses a Challenge to Success in Music Theory I

The data showed that the class environment posed a challenge to success in Music Theory I. More than one third of the students indicated the classroom was too hot or that it smelled. Many of those students claimed the conditions were distracting to them. Examples of student comments supporting this claim include

- “Yeah its early and you’re in this really hot room.”
- “Some of my worst memories are how the classroom smelled.”
- “I will tell you something horrible. The AC was never high enough, and the room was stuffy and smelled horrible! And that's just a big distraction the entire time.”
- “That [the smell] is all I could think about half of the time.”

Some of the students who complained about the smell in the classroom associated the smell with students' poor personal hygiene. Examples of student comments supporting this claim include

- "Sometimes I'm shocked that college kids do not know when to bathe."
- "I think this issue has something to do with it being at 8am probably. They aren't getting up early enough to get ready."
- "Sometimes people get kicked out of class just because of hygiene."
- "I remember having lecture after lecture when I was a music major about the importance of hygiene."

Theme 7: Feasible Solutions Exist for Overcoming Challenges to Success in Music Theory I

The final theme that emerged was that feasible solutions exist for overcoming challenges to success in Music Theory I. Both instructors and all but three of the 19 students who participated in the this study, all of whom happened to be in the focus group, provided solutions for helping students overcome the challenges to success in Music Theory I. Many of the student and instructor suggestions were related to the structure and management of the class and associated policies. Students suggested implementing a more lenient absentee policy, slowing the speed of the class, changing the class time, and reducing the class size. Two students suggested offering Music Theory I in the spring as well as in the fall. One instructor, who was aware that students who are enrolled in both developmental math and Music Theory I during their first semester typically fail one or both of the courses suggested that students be required to pass developmental math prior to being allowed to enroll in Music Theory I.

Four students suggested various methods for assessing students' music theory knowledge prior to enrolling in Music Theory I. Two of those students suggested some sort of course, and two students suggested an assessment. One of the two students who suggested an assessment referred to the music theory aptitude test that is given to music theory students on the second day of the course and indicated that waiting until students were already enrolled in the class was too late to use this assessment effectively. One instructor stated that the knowledge assessment that is given to students on the second day of class could be used to divide students into college level Music Theory I and a developmental music theory course. That instructor also recognized the logistical challenges of implementing this process.

The majority of comments pertaining to solutions to the challenges to success students face in Music Theory I were related to more practice time and getting help for the students. Some students specifically mentioned needing more aural practice and more hands on practice. However, the majority of students made statements about needing more help in general. In the discussion here, student and instructor comments about help were grouped according to whether they related to getting help for students prior to the start of the course or during the semester.

More than one third of the students and one of the instructors suggested having students participate in an introductory learning experience during the summer to prepare them for enrollment in Music Theory I in the fall. Two students suggested that incoming students could be told what to expect in Music Theory I. One student suggested that incoming students could be provided with the course syllabus prior to the start of the course. One student explained, "If students had an idea of what they were getting into,

they'd probably do better." Other students suggested more involved learning experiences, such as providing students with "summer stuff that wasn't graded but maybe like some . . . tutorials and stuff . . . maybe just so they could read and start to prepare themselves." One instructor suggested a similar idea. Other students and one instructor commented that it would be helpful to have structured learning experiences of some sort, perhaps an abbreviated introductory course or a workshop conducted during band camp.

The majority of students also suggested the help be provided to Music Theory I students during the semester. Some students were not specific about the type of help that should be offered. One student said, "I think as long as something is offered to supplement [the learning in the course], it doesn't matter." One student suggested that each course have a teacher assistant to help students during the regularly scheduled class meetings. One instructor mentioned that in the past, students have been paired with mentors, students who have succeeded in Music Theory I. The other instructor suggested grouping students in the semester-long freshman orientation course by major so that music majors would participate in the orientation with only other music majors. However, most students suggested that help be offered in the form of tutoring and that a lab could be used for additional instruction or tutoring. With regard to tutoring, students said,

- "It is kind of frustrating that there wasn't a student tutor because Mr. X was busy and sometimes you kind of felt bad to go over to get help or to try and find a spot in his schedule."
- "Yeah but it's just like… there isn't somebody dedicated for us. There isn't a student worker or somebody in academic support or student support that

actually just tutor's people in theory, but it would probably help out a lot of folks."

- "I would say it would fit perfectly with student or academic support services. They should have a paid position for music theory just like they do for science, math, English and so on."
- "I think that [a tutoring class] would have really helped. I felt like sometimes, you know . . . you have like a whole hour of class time but other people ask questions and you don't have time to really focus on stuff that you are having trouble with."
- "I mean, I am almost positive that if there was some kind of tutoring available for people to just step in and ask some questions to get down the fundamentals of what they need to learn in the class then it would be a lot better."
- "And I would make them do one-on-one tutoring maybe with the teacher at least once a week and I would offer it every semester. Which I know it is hard at our school because we don't have anybody."

Many students suggested that junior and senior students would be well-suited to being tutors. The students expressed that juniors and seniors would be ideal tutors. One student suggested that tutors should be upper level students because a student tutor "is going to be your age so they are going to know what you are going through." Other students suggested that upper level students would be knowledgeable about the topics the students were studying but also potentially willing to volunteer their time.

Finally, many students suggested that a lab would be helpful. Examples of student comments that support this claim are

- "I think if we had a lab for music theory, we could easily you know . . . visually see how the chords are built and not in such a short amount of time like in the class. Actually, like spend time to discuss, analysis and talk about it . . . but in class you really don't have that much time.
- "Now that I think would be cool if we had the same amount of time in the classroom four days a week and then the 5th day would be the lab."
- "Yeah, the labs wouldn't be introducing anything new. It would be applying what you learned."
- "I am absolutely for it."

One student who suggested that a lab be offered recognized the challenge of fitting a lab into an already full course load. That student said, "I think a lab would be good, but as you see the music major's schedule, there is hardly any time to eat. So having a lab . . . they would have to cut out another music requirement." This student suggested that perhaps choir requirements for music majors and instrument requirements for vocal majors could be eased a little to free up time for a lab.

Other students recognized that the current Music Theory I course is designed with a lab component. Examples of student comments that support this claim are

- "I mean we have a lab added in, don't we? Isn't that true?"
- "You have a lab scheduled in, and when you add the CRN's it's like TBA or something."

- "I've just always known for the lab credit to be like 'just add it too' but if there was a real specific time like how science classes structure labs . . . that would be cool . . . It would have helped me a lot."

One student suggested that giving students extra credit for the lab time might incentivize students to participate.

Summary

In this section, I present a review of the study findings that were described in detail in the previous sections. I also discuss those findings in relation to the literature and theoretical framework. Finally, I discuss the project, including the thought process associated with determining what project to pursue, and provide a description of the project deliverable.

Review of the Findings

The findings in this study are well-aligned with the identified problem for the study and the research question. Specifically, the results from this study help elucidate the challenges to success faced by students enrolled in Music Theory I at MDU, which was the research question for this study. Furthermore, those identified challenges help provide understanding of why first-year-music-program students at MDU consistently withdrew from or failed Music Theory I, which was the problem identified for this study. It was not surprising that the findings aligned with the research question were related to the findings associated with the problem statement given that the research question was developed specifically to generate data that could be used to help improve undesirable conditions identified in the problem statement.

Results of data analysis indicated that both student-related (Themes 1-3) and college-related (Theme 4-6) factors posed challenges to student success in Music Theory I. The three student-related themes were lack of student preparedness for college, lack of appropriate effort, and student characteristics. Students who were not prepared for college (a) lacked overall academic preparedness, (b) lacked preparedness with regard to theory-specific knowledge, (c) found the course material difficult, (d) lacked understanding of expectations at the college level, and (e) lacked maturity. Students who did put forth the appropriate amount of effort may not have made effort in general, may not have made effort to complete their homework, and may not have made effort to get help when they needed it. Student characteristics that posed challenges to success in Music Theory I were student attitude and personal student factors.

The three college-related themes that emerged were inconvenient class time, class pace too quick, and class environment. Students found the 8 a.m. class time to be too early and thus inconvenient and not conducive to success in the course. Students found the speed of the course to be too quick but also recognized the need to move quickly in order to be able to cover the required curriculum materials. Students found the classroom environment not conducive to learning, in particular with regard to the temperature, stuffiness, and body-odor related smell.

In summary, the findings in this study show that students encounter a variety of challenges to success in Music Theory I, including challenges related to academic preparedness but also personal characteristics. Students described themselves and other students as lacking maturity, lacking understanding of expectations at the college level, and lacking appropriate effort. These characteristics are indicative of students struggling

to transition from more structured home and school settings to the college setting where students must be responsible for themselves and take responsibility for ensuring their academic success. Taken together, these findings indicate that a variety of factors work together to impact student success in the college setting and clearly identify specific challenges that students at MDU in particular have been experiencing. Based on these findings, I concluded that the research question posed for this study was answered successfully. In addition, the specific challenges to success identified in this study may help explain why students at MDU have been withdrawing from and failing Music Theory I at high rates. Furthermore, these results guided the development of the project for this study, which I anticipate can help decrease the high rates of student withdrawal from and failure in Music Theory I at MDU. In this way, the findings in this study may directly impact the problem identified in this study.

Findings in Relation to the Literature and Conceptual Framework

The findings from this study are supported in the literature and by the conceptual framework for this study. Students in this study who faced challenges in Music Theory I were not academically prepared for college in general or with regard to music theory in particular. Results of previous studies have shown that lack of academic preparedness can impact student achievement (e.g., Shaw & Mattern, 2013; Slanger et al., 2015; Whannell & Whannell, 2014). Also, although not a strong indicator of performance in music theory courses, prior music skills and successful performance in other music-related courses have been found to be correlated to achievement in music theory courses as well (Lehmann, 2014). However, as was found to be true in this study, Camara, O'Connor,

Mattern, and Hanson (2015) also claimed that student achievement in college is the result of more than just the capacity to perform academically.

Most of the students in this study who faced challenges in Music Theory I were 18 years old and described as lacking maturity. Previous research on factors associated with student performance has shown that students who are more likely to be at risk of failure during their first semester of college are young in age (Logan et al., 2016; Whannell & Whannell, 2014). Wang et al. (2012) suggested that younger students typically lack social and emotional competence (i.e., maturity), which is connected to student performance.

Students in this study who faced challenges in Music Theory I also demonstrated that they lacked confidence. Other researchers have found that students with low levels of self-efficacy are less likely to be academically successful when compared to their peers with higher levels of self-efficacy (e.g., Krumrei-Mancuso et al, 2013; Wright et al., 2012). This outcome is possible because in the academic setting, self-efficacy, combined with outcome expectations, can influence a person's goals and actions and thus performance outcomes (Lent et al., 1994).

Many students in this study who faced challenges in Music Theory I said that they and other students lacked responsibility and did not put forth the necessary effort to be successful, including attending class, doing their homework, and studying. According to the literature, students who are organized, punctual, and reliable and who take pride in their work have been found to have higher GPAs than their counterparts who do not share these habits and skills (Boateng, Plopper, & Keith, 2016). Similarly, students with high rates of class attendance are less likely to be at risk of failing during their first semester of

college when compared to students with high rates of class absences (Whannell & Whannell, 2014), and, when compared to students who studied more, students who studied less have been found to have lower achievement scores during their first (Krumrei-Mancuso et al., 2013) and second semesters (NSSE, 2015).

Students in this study who faced challenges in Music Theory I also demonstrated, that in general, they struggled to transition to the college setting. Many student were described as having trouble adjusting to the expectations of college life, including increased responsibility for themselves and their academic outcomes. Also, many students struggled to understand new content presented in Music Theory I. Of the 19 students who participated in this study, (a) only six students passed the class the first time; (b) three students failed, withdrew, or both but passed on their second or third attempts; (c) four students failed, withdrew, or both but plan to return; and (d) six students failed, withdrew, or both but do not plan to repeat the class.

These conditions also have been expressed in the literature, in particular the literature that made up the conceptual framework for this study. According to the literature, students often struggle to transition to the college setting (Pascarella & Terenzini, 1980; Tinto, 2006). Factors that may impact that transition include difficulty adjusting to a new environment and inability to integrate new knowledge with previous information (Tinto, 2006). Ultimately, students who struggle to transition to college setting may fail and/or withdrawal from school (Tinto, 2006).

Project

The idea for the project for this study emerged from the study data. Specifically, to make my decision regarding the project, I reflected upon the concepts expressed in the

thematically organized data presented in the previous sections. I considered not only the concepts that expressly described the student- and college-related factors that posed challenges to student success in Music Theory I but also the students' and instructors' suggestions for addressing those challenges.

A concept that appeared repeatedly in the data was students' need for additional help, and both students and instructors suggested various ways in which students could be provided with additional help. One of those ways was to add a lab course to support Music Theory I. Another way was to develop a remedial music theory course.

It must be noted that Music Theory I is essentially a remedial course already, although it is not distinguished as one by MDU. Music Theory I is essentially a remedial course because it is based on remedial content in the textbook that guides the curriculums of the music theory courses. There are four music theory courses offered at MDU: Music Theory I – IV. All of the curricular content for the four music theory courses is drawn from the same textbook. The Music Theory II-IV courses are based on Part B of the textbook, Structural Elements of Music, which is made up of concepts that are directly related to music theory. However, Music Theory I is based on Part A of the textbook, Fundamentals of Music, which is made up of concepts that are not directly related to music theory but rather are basic concepts of music necessary for understanding music theory. In this way, Music Theory I can be considered a remedial course. For that reason, the music theory lab is described in this document as a music theory lab based on remedial music concepts.

A curriculum plan for a music theory lab based on remedial music concepts

is a way to help students and thus aligns with a need clearly expressed by students and instructors at MDU. In addition, it also reflects participants' suggestion for a lab course as well as participants' suggestion to provide instruction on remedial topics. For this reason, a curriculum plan for a music theory lab focused on remedial music concepts was chosen as the project for this study. A thorough description of the study project as well as the rationale for choosing this project and its design is provided in the next section. The project deliverable will be a report describing the rationale for the development of the music theory lab, the content of the lab curriculum, and the roles and responsibilities of essential faculty and facilitators.

Section 3: The Project

In this introduction, I provide an overview of the project deliverable. A more detailed discussion of the specific elements of the project is presented immediately afterward. A clear understanding of the content of the project provides useful insight for considering the rationale for the project presented in a subsequent subsection.

The project for this study is a curriculum plan for a semistructured, nonlecture, computer-based music theory lab course based on concepts of music theory. The lessons are semistructured and designed to allow for flexibility in student learning in an online learning environment using Blackboard. The music theory lab is intended to provide academic support for students at MDU enrolled in the Music Theory 1 course.

Because students often repeat Music Theory I and because Music Theory I is only offered in the fall, students in the music theory lab may be any level of degree completion. The scope of concepts covered in the music theory lab is not new but rather mirrors the concepts included in the current curriculum for Music Theory I, which are remedial in nature. Because the curriculum plan for the math theory lab is based on remedial content and was developed for college students, the lessons and delivery platform were developed using best practices for designing developmental education and for teaching adult learners, respectively. The rationale for this decision is discussed more thoroughly in the subsequent Rationale subsection.

The platform for the music theory lab is Blackboard, a commercially available online student information system used by MDU. All students and instructors at MDU have access to the platform. Using Blackboard provides students with a central location for accessing the lab materials needed for the course. Additionally, Blackboard may serve

as a resource for communicating with other students. Teaching assistants will serve as facilitators of student learning in the music theory lab.

The goal of the music theory lab is to help students improve their understanding of music theory concepts introduced in Music Theory I at MDU. Ideally, improving student understanding of music theory concepts will help them perform better in Music Theory I. If students perform better in the course, they will pass the course the first time they take it, and thus will not have to delay graduation or be likely to consider changing majors or dropping out of school. The goal of this project is discussed further in the next section as it relates to the rationale for choosing a curriculum plan as the project genre for this study and for the design of the music theory lab.

Content of the Project

The curriculum plan is made up of four units broken down over the course of 12 weeks. Unit 1, Notation, is made up of the staff (Week 1), intervals (Week 2), and rhythm (Week 3). Unit 2, Scales, Tonality, Key, and Modes, is made up of scales (Week 4), transposition (Week 5), and key signature (Week 6). Unit 3, Intervals and Transposition, is made up of intervals and transposition (continued from previous lessons; Week 7), consonance and dissonance (Week 8), and types of intervals (Week 9). Unit 4, Chords, is made up of melody and harmony (Week 10), triads (Week 11), and inversions (Week 12). Overall, the concepts introduced each week are distinct from the prior weeks, although concepts introduced each week build upon one another and are applicable in subsequent lessons.

The lessons include activities and resources appropriate for students with various levels of previous music theory knowledge and experience. Each lesson plan includes at

least one learning objective. A table of the weekly units and associated objectives is presented in Appendix H. Each weekly learning objective is supported by (a) a video tutorial component to provide content information, (b) an informational reference guide of concepts introduced in the tutorial videos, (c) online learning activities, and (d) supplemental learning materials in the form of printable exercises. To challenge more advanced students, a discussion prompt and advanced training opportunities are included in each week's lesson; however, all students are encouraged to participate in the discussion and work with the advanced training opportunities. Those opportunities include access to ear training tutorials, an online music theory website, and music notation software on the school computers. Further, to allow students a forum to communicate openly with other students about any subject-related concerns or interests they may have, a digital student lounge is available through the course portal on Blackboard.

The music theory lab curriculum was designed to be implemented by teaching assistants during the lab class that is currently scheduled as part of Music Theory I but that is typically underused. However, because seating in the physical location where the music theory lab will be conducted is limited, three sessions of the lab will be offered. The music education instructor will be asked to take responsibility for recruiting the teaching assistants from their courses, determining a schedule for them, and offering credit of some sort for their effort. The music education instructor will be encouraged to make the music theory lab teaching assistant opportunity a mandatory part of music education course to facilitate student participation.

Ideally, two or three teaching assistants will be assigned to each lab period. The teaching assistants will not be responsible for developing the lessons. Rather, they will follow the lesson plans I develop to facilitate student learning. Teaching assistants will not be responsible for grading students in any way. The primary function of the teaching assistants will be to tutor and instruct students as needed on an individual basis and according to students' unique learning needs. This instruction may include helping students understand the information included in the topic-specific content tutorials for each week or how to apply the concepts presented in those tutorials to the online activities and printable exercises. They also will be asked to report student attendance to the Music Theory I instructor, who will be able to assign students credit for participation as part of their overall grade for Music Theory I.

Rationale

In this section, I present a scholarly rationale for selecting a curriculum plan for my project. First, however, I discuss the rationale for not conducting projects of other genres. This discussion includes consideration of the data I collected for this study and presented in Section 2. In this discussion, I also address how this particular genre of project can be used to address the problem identified for this study. Finally, I discuss the rationale for the choice of design for the project.

Rationale for rejected project genres. Other potential project choices were not appropriate for this study. An evaluation report was not an appropriate deliverable for this study because my study was not based on a program evaluation. A professional development/training curriculum was not an appropriate deliverable for this study because no data from the study indicated that poor-quality teaching posed challenges to

student success in Music Theory I. Although a policy recommendation could have been developed as the project deliverable for this study, such a project would have placed the responsibility for implementing change on the administrators at MDU.

Some ideas suggested by students and instructors during the interviews also were not suitable for application in this project. Students in this study communicated that they struggled to get to class at 8 a.m. and to keep up with the speed of the class. I did not consider the suggestion to implement a more lenient absentee policy as a means of compensating for the early class schedule a suggestion that was conducive to learning in the college setting. Other suggestions, such as slowing the speed of the class, changing the class time, and reducing the class size, were suggestions that, although possible to implement, would be unlikely to be approved for implementation at the college for various academic, logistical, and financial reasons, respectively. Two students suggested offering Music Theory I in the spring as well as in the fall. Although this suggestion was feasible and could help students who fail Music Theory I in their first semester by allowing them to repeat the class immediately rather than having to wait until the following fall, it would not address the immediate problem of student challenges in the course itself. One instructor suggested that students be required to pass developmental math prior to being allowed to enroll in Music Theory I so that they could focus on one substantial academic challenge at a time. However, between the time I interviewed this instructor and the time I was completing this discussion, administrators at MDU implemented a policy to that effect.

Students also suggested assessing student knowledge of music theory. At the time of this study, students in Music Theory I were assessed on the second day of the course.

This information was used on an informal basis by instructors in the music program so that they could gain a better understanding of students' preparedness for the course. One instructor suggested using assessment data to divide students into college-level Music Theory I and a developmental music theory course. That instructor also recognized the logistical challenges of implementing this process. I, too, recognized the logistical challenges associated with implementing this process and decided not to pursue this solution as the focus of my project.

Students and instructors also suggested that student outcomes in Music Theory I could be improved by providing students with support prior to their enrollment in the course. Although the suggestion was made to provide students with a copy of the syllabus prior to the start of the class, I was not convinced of the value of doing so. Knowing what topics are going to be covered in the course will not in and of itself help students understand those topics. Additionally, although a few students may take it upon themselves to find tutorials that help them understand the material or otherwise familiarize themselves with the material, it is unrealistic to believe that many students would do so. Therefore, the impact of implementing this suggestion would likely be minimal at best. Other suggestions to implement structured learning experiences were plausible and potentially beneficial. However, not all students would be able to attend band camp. Therefore, offering a structured learning experience for students during band camp would not be the best way to reach all students who need help. Further, providing structured learning experiences for students online would not likely be impactful unless those opportunities were mandatory. Because I was trying to develop a project that could be implemented within the current academic structure at the college so that it would

likely be approved for implementation by administrators, I did not perceive the development of a mandatory online structured learning experience as a viable option for my project deliverable.

One instructor mentioned that in the past, students in Music Theory I have been paired with higher level students who functioned as mentors. Although a mentor program would be feasible and relatively simple to implement on campus, I would not have been able to ensure equity of support for students. There would have been no way to account for the mentors' levels of knowledge or to control for the quality of support provided during mentoring sessions. For this reason, I did not perceive a mentoring program to be a good option for my project deliverable. For the same reason, I did not perceive the implementation of an open tutoring program to be a good option for my project deliverable.

Rationale for chosen project genre. Developing a lab curriculum for my project deliverable was logical as an outcome of the data I collected for this study. First, students suggested that they needed additional help and practice time. Second, students specifically requested lab time; two students noted that a scheduled lab is currently associated with Music Theory I but not used. Third, students suggested that upper level students would be good sources of help not only because they would be familiar with the music theory material but also because they would be similar in age to the students and thus could better relate to their frustrations and needs. In addition, results of data analysis revealed that the majority of students described themselves as lacking appropriate fundamental music theory knowledge, such as the ability to read music or play an instrument, prior to being enrolled in the course. The students also described the material

as “difficult” and said that they “struggled.” Based on these data, a lab curriculum that can be implemented by teaching assistants as part of Music Theory I was a logical choice for my project deliverable.

Developing a lab curriculum for my project deliverable was logical not only as an outcome of the data but also after consideration of the logistical and financial aspects associated with implementing a lab curriculum. First, the lab component of Music Theory I already existed at MDU, which meant that only two additional sessions of the lab would need to be worked into the schedule of classes. Students with scheduling conflicts would be given priority enrollment for the lab sessions of their choice. Second, upper level students majoring in music education could serve as teaching assistants on a rotating basis so that there would be no cost to MDU for additional instructors. Because there would be multiple teaching assistants assigned to each lab period, more students would have the opportunity to receive one-on-one guidance.

Finally, developing a lab curriculum for my project deliverable made good sense considering the potential for positive outcomes. Students who participate in a music theory lab are likely to better understand the material they are learning in Music Theory I and ultimately be more successful in the course. Students who are more successful in the course will be able to move on to Music Theory II without delay and with the appropriate knowledge needed for success in that and subsequent music theory courses as well. Students who are able to stay on track with the course schedules associated with their majors are more likely to graduate on time and graduate with their originally chosen major.

Moreover, by developing a music theory lab curriculum as my project deliverable, I would be able to provide administrators at MDU not only a means of helping students be more successful in Music Theory I but also a means of helping students that can be implemented immediately, with no need for additional funding, and with little administrative effort. Because there were no obvious drawbacks to implementing this music theory lab curriculum and because students could benefit from it in multiple ways, it was likely that this music lab curriculum would be well-received at MDU, would be implemented as soon as possible, and would contribute to positive social change in the form of improved student outcomes at the school.

Rationale for project design. The music theory lab is a semistructured computer-based course that includes the use of online activities. The course is void of traditional lectures and will be implemented by teaching assistants who will serve as facilitators of student learning. The primary function of the teaching assistants is to tutor and instruct students as needed on an individual basis and according to students' unique learning needs. Although I included some of these design elements of my own accord based on my personal teaching experience, they all represent best practices for designing developmental education and for teaching adult learners.

The rationale for applying to the music theory lab the best practices for designing developmental education and for teaching adult learners is multifaceted and rooted in the literature. Perceiving students in Music Theory I as adult learners in need of developmental education may help elucidate the rationale for the design of the music theory lab. It also may be helpful to understand the underlying concepts associated with successful redesign of developmental education courses.

The need for developmental education. Research has shown that students often arrive at college unprepared to meet the requirements of college-level courses (Bailey & Cho, 2010; Bailey, Jeong, & Cho, 2010). In order to gain the skills necessary to be successful in college-level courses, such students must enroll in one or more developmental education courses (Bailey & Cho, 2010; Bailey et al., 2010). As indicated previously, Music Theory I at MDU can be considered a remedial course because the curriculum content is based on remedial concepts in music as opposed to actual music theory. Essentially, then, every student who enrolls in Music Theory I at MDU is enrolling in a remedial course.

Unfortunately, the majority of students who enroll in developmental education courses do not pass those courses (Bailey & Cho, 2010; Bailey et al., 2010) or complete the sequence of remedial courses required to gain access to college-credit courses (Bahr, 2012). In addition, students enrolled in developmental education courses often do not continue their studies for a second year and are less likely to transfer to a 4-year university than students who are not enrolled in developmental education courses (Crisp & Delgado, 2014). Although not every student at MDU who enrolls in Music Theory I fails or withdrawals from the course, many do, and this scenario was consistent over the 6 years prior to this study (see Table 1). Further, although long-term data on the outcomes of all the students who fail or withdrawal from Music Theory I are not available, as indicated previously, it is known that many students who fail or withdrawal from Music Theory I experience delayed graduation or choose to change their majors, neither of which are positive outcomes.

I do recognize that students in Music Theory I have not been assessed and deemed unprepared for a college level music theory course and subsequently enrolled in a remedial music theory course. Although students do take a skills assessment on the second day of Music Theory I, the outcomes of that assessment are not used to determine placement in a remedial music theory course because no remedial music theory course technically exists at MDU. However, if the course content of Music Theory I is actually remedial, and students do not pass the course, a logical and feasible assumption would be that those students did not possess the needed fundamental concepts to be successful in a music theory course based on actual music theory concepts. Likely then, if there was an official remedial music theory course at MDU and if students were assessed for placement in either that remedial music theory course or a college level music theory course, the students who are failing or withdrawing from Music Theory I would be placed in a remedial course.

Concepts of remedial course redesign. According to the National Center for Academic Transformation (NCAT; 2017d), the design of traditional remedial courses does not support effective learning for students enrolled in those courses. One reason that traditional remedial courses are not effective is that they do not meet the needs of the adult learner. "Developmental education is the integration of courses and support services guided by the principles of adult learning and development" (Boylan, 2016, p. 9). Therefore, if developmental education courses do not incorporate design elements that consider the unique needs of the adult learner, they are not likely to be successful. However, course redesigns that incorporate online instructional materials, focus on the individual needs of the learner, and promote student engagement in activities versus

passive learning in lectures have been shown to be effective (NCAT, 2017d), likely because they appeal to the needs of the adult learn as expressed in Knowles, Holton, and Swanson's (2015) principles of the adult learner. It is for these reasons, that I chose to design the music theory lab as a semistructured, nonlecture, computer-based course based on NCAT's course redesign methodology. The full course redesign methodology and the principles of the adult learner are described in detail in the following subsection.

Review of the Literature

The project for this study is a curriculum plan for a music theory lab based on remedial music concepts. Because many of the students enrolled in Music Theory I at MDU can be considered remedial learners, this subsection includes a review of the literature, from peer reviewed journals, related to developmental education appropriate for discussion in this study. Those subsections are Characteristics of the Developmental Learner, Factors that Impact Student Need for and Outcomes in Developmental Education, Quality Improvement Strategies for Improving Student Outcomes, and Quality Improvement Strategies for Course Redesign. To provide readers with a full understanding of the course redesign process, I also included a discussion of the challenges to redesigning courses. That discussion is presented in the Challenges Associated with Course Redesign subsection. Also, because the design of the music theory lab is based not only on strategies for developmental education course redesign but also the principles of adult learning, a review of the literature, from peer related journals, related to the principles of adult learning are discussed here as well. That discussion is presented in the Adult Learning Theory subsection.

A general rationale for the choice of genre for the project was provided in the previous subsection. However, in the review of the literature here I provide a more specific explanation of how the literature supports the appropriateness of the chosen project genre for addressing the problem in this study. This discussion is provided in the Impact of Course Redesign on Student Outcomes subsection.

Because the content of the music theory lab mirrors and serves to support the content of Music Theory I currently in place at MDU, a discussion of the applicability of the course content itself is not a focus of this discussion. The purpose of this project was not to question the content of the Music Theory I curriculum but to support it through a music theory lab. Therefore, in this literature review, I include thorough, critical, and interconnected analysis of how the literature and theory support the design of the project. Those analyses are presented the Application of Course Redesign Strategies in this Study Project subsection and the Application of Adult Learning Principles in this Study Project subsection, respectively.

To conduct the literature review for the project portion of the study, I used the EBSCOhost, Education Resources Information Center, JSTOR, PsychINFO, and SAGE Journal Online databases. I searched for studies conducted in the United States between 2012 and 2017. Key search terms included *remedial education, developmental education, remedial learner, course redesign, adult learner, adult learning, Malcolm Knowles,* and *andragogy*.

In my search for literature, I found little research to date pertaining to developmental education for music courses in particular. Therefore, I included research on developmental education in general and specific subject areas when they were

discussed. The majority of developmental education courses explored in the research were developmental math and English.

Characteristics of the Developmental Learner

Students in developmental education make up between 22% (Utah) and 56% (Maryland) of the student population in colleges nationally (Jimenez, Sargrad, Morales, & Thompson, 2016). Based on an analysis of National Center for Education Statistics data, five states have developmental education rates between 22% and 30%; 23 states have developmental education rates between 31% and 40%; 21 states, including Washington D.C., have developmental education rates between 41% and 50%; and two states have developmental education rates above 50% (Jimenez et al., 2016). Although rates of student enrollment in developmental education courses may vary notably, students enrolled in developmental education courses and students who do not complete the required sequence of remedial courses tend to share similar characteristics when compared to their peers who are enrolled in college level courses.

One way in which students enrolled in developmental education courses and students who do not complete the required sequence of remedial courses differ is in regard to level of parent education. Specifically, students whose parents attended college are less likely to be enrolled in developmental education courses than students whose parents did not attend college (Crisp & Delgado, 2014). Another way in which these groups differ is in regard to enrollment status. Specifically, students who are enrolled in college full time are more likely to complete the required sequence of developmental education courses when compared to students enrolled in college part time (Bailey et al., 2010). In addition, when compared to students in college-level courses and students

enrolled in only one developmental education course, students enrolled in multiple developmental education courses have lower academic self-concepts (Martin, Goldwasser, & Harris, 2017).

Students enrolled in developmental education also may differ with regard to other demographic factors, their prior levels of performance and experience, and the time between high school graduation and enrollment in college. These potential influences are discussed separately in this subsection.

Demographic factors. Data from descriptive research has shown differences in age among students enrolled in development education courses and students enrolled in college level courses. For example, the majority of students enrolled in developmental education courses who are of traditional college age and who entered college immediately after graduating from high school are more likely to the complete the sequence of developmental education courses as recommended (Bailey et al., 2010). With regard to developmental math in particular, however, older students may be more likely enroll in developmental courses when they are recommended (Ngo & Kosiewicz, 2017).

Data from descriptive research has shown differences in gender among students enrolled in development education courses and students enrolled in college level courses. Overall, male students are less likely to be enrolled in developmental education when compared to female students (Crisp & Delgado, 2014). With regard to math in particular, male students are less likely to enroll in prescribed developmental courses when compared to female students (Ngo & Kosiewicz, 2017). Male students are also less likely to complete sequences of developmental education courses (Bailey et al., 2010).

Data from descriptive research has shown differences in ethnicity among students enrolled in development education courses and students enrolled in college level courses. For example, research has shown that when compared to White students, Black and Hispanic students are more likely to be enrolled in developmental education (Crisp & Delgado, 2014). Black students also tend to make up the largest population of students in developmental education who do not complete the recommended sequence of remedial courses overall (Bailey et al., 2010) and especially with regard to math (Ngo & Kosiewicz, 2017). One reason that Black students may be less likely to complete the sequence of recommended remedial coursework is that they are less likely than other students, specifically Hispanic and Asian students, to enroll in the first developmental course to which they are assigned (Ngo & Kosiewicz, 2017).

Among students at an Alaskan college, Black and Hispanic students had the highest rates of assignments to developmental math courses (79% and 70%, respectively; Hodara & Cox, 2016). Alaskan natives from rural areas also had high rates of assignments to developmental math courses (70%; Hodara & Cox, 2016). They also had the highest referral rates for English (Hodara & Cox, 2016).

Prior student performance and experience. Data from descriptive research has shown differences in prior student performance and experience among students enrolled in development education courses and students enrolled in college level courses. With regard to developmental education overall, students who had low GPAs in high school were more likely to be assigned to developmental education courses when compared to students with high or middle range GPAs (Crisp & Delgado, 2014). Similarly, when compared to students with high skill levels in math and English, students with low skill

levels in math and English are less likely to complete required sequences of developmental education courses (Bahr, 2012). Students who earned only minimal credits in high school also were more likely to be assigned to developmental education courses when compared to students who earn more credits in high school (Crisp & Delgado, 2014).

This pattern of student experience and developmental education is apparent with students in developmental math as well (Benken, Ramierez, Li, & Wetendorf, 2015). However, passing courses in high school alone is not a strong predictor of immediate enrollment in college level courses (Benken et al, 2015). For example, students who graduate with distinguished diplomas also have demonstrated the need for developmental education in college (Pretlow & Wathington, 2013). In addition, some students may only complete high school math through Algebra II, and it may take them up to 4 years to do so (Benken et al., 2015). As a result, when compared to the capacity of the variable passing courses in high school to predict the need for developmental education in college, the predictive capacities of the variables highest level of math students have taken and the time it requires students to pass the course are greater (Benken et al, 2015).

Delayed entry to college. Data from descriptive research has shown differences between students enrolled in developmental math and students enrolled in college level courses with regard to the amount of time elapsed between leaving high school and enrolling in college. Specifically, students who enter college immediately after leaving high school are less likely to enroll in developmental education course than are students who do not enter college immediately after leaving high school (Crisp & Delgado, 2014; Hodara & Cox, 2016). Possibly, that scenario is prevalent among developmental math

students because math skills may be lost over time if they are not used; therefore, the longer a student delays entry into college, the greater the length of time that student is likely to experience without actively practicing his or her math skills (Hodara & Cox, 2016).

Factors That Impact Student Need for and Outcomes in Developmental Education

Although much of the research pertaining to characteristics of students and their enrollment in developmental education is descriptive in nature, inferential analyses have been conducted on this topic. With regard to the need for developmental education, research has shown that academic math readiness, student course-related behavior, family income, highest level of high school math completed, and high school GPAs are significant predictors of student need for developmental math (Houston & Xu, 2016).

Research also has shown that a variety of factors may impact student outcomes in developmental education. For example, in a study of 1,254 students enrolled in developmental math courses, both academic math readiness and student course-related behavior were found to impact student levels of knowledge gained during the courses (Li et al., 2013). Both academic math readiness and student course-related behavior also can impact each other to affect student learning, and the relationship between levels of knowledge gained and both academic math readiness and student course-related behavior may be mediated by level of student effort (Li et al., 2013).

Student success in developmental education courses may be impacted by instructional quality, which may be influenced by a variety of instructor characteristics. For example, for students in developmental math, instructors' level of education (master's) and employment status (full-time) have been found to impact, albeit only

slightly, student performance on final exams (Chingos, 2016). One reason that part-time employment status of developmental education instructors may impact student outcomes is that part-time instructors often spread their time among several institutions, which hinders their capacity to become fully integrated into any one institution (Kosiewicz, Ngo, & Fong, 2016). This lack of integration may isolate part-time instructors from resources and alternative models for delivery of developmental education for students (Kosiewicz et al., 2016).

Quality Improvement Strategies for Improving Student Outcomes

Educators have called for new approaches to educating remedial students (Brothen & Wambach, 2012), and educational researchers have responded with strategies for helping students improve their outcomes in developmental education courses. In unprecedented legislation enacted in 2013, the State of Florida responded by passing Senate Bill 1720 (FL S.B. 1720, § 2013-51, 2013), which mandated the use of many of those alternative strategies for developmental education.

Because students who complete developmental education courses become eligible to complete college-level courses, by improving student outcomes in developmental education courses, strategies designed to help improve outcomes for students in developmental education may ultimately help improve graduation rates among that population as well (Scrivener et al., 2015). Those strategies may be broad or narrow in scope.

One general strategy for helping students in development education courses improve their outcomes is to create lesson plans that include multiple teaching approaches (Bonham & Boylan, 2011). Examples of teaching approaches that can be

used simultaneously include “mastery learning, active learning, individualized assistance, modularization, or personalized assistance (such as Structured Learning Assistance, frequent feedback, or the use of laboratories rather than classrooms)” (Bonham & Boylan, 2011, p.4). Counseling and tutoring also may be a useful strategies for improving student outcomes in developmental education courses in general (Vischer, Weiss, Weissman, Rudd, & Washington, 2012). Tutoring has been found to be especially help for Hispanic students taking developmental education courses (Gallard, Albritton, & Morgan, 2010).

Students in need of developmental English courses in particular may benefit from accelerated learning opportunities in which students receive remedial support for their learning in college entry level English courses, typically English 101, at the same time they are enrolled in the basic English course (Cho, Kopka, Jenkins, & Jaggars, 2012). Because students participate in the developmental and college-level courses simultaneously, they are, potentially, able to complete their English requirements in less time than if they had to complete their developmental coursework prior to being able to enroll in the college-level courses (Cho et al., 2012). Students in developmental math also may benefit from participation in accelerated courses in which the content of two courses is completed in one semester rather than two (Jaggars, Hodara, Cho, & Xu, 2015). Accelerated courses may be impactful for students in developmental math because early completion of developmental math courses may contribute to early completion of college-level math courses, a condition that has been associated with fulfillment of college math requirements (Wang, Wang, Wickersham, Sun, & Chan, 2017). Participation in both accelerated developmental English and math courses may be most

beneficial for students who begin their work later in developmental education sequences (Hodara & Jaggars, 2014).

Students in developmental math, about whom the majority of literature on developmental education is focused, may benefit from three additional quality improvement strategies. First, students in developmental math may benefit from participation in learning communities, in which small groups of student are enrolled in thematically related courses as a cohort (Vischer et al., 2012). Second, students in developmental math from low socioeconomic backgrounds in particular may benefit from nonacademic support such as access to free career counseling, tutoring, and textbooks as well as help with the development of study skills (Scrivener et al., 2015). Third, students in developmental math may benefit from course redesign that includes the use of informational technology (NCAT, 2017a, 2017d), specifically instructional technology that provides real-time feedback that can help students improve their math reasoning skills (Pearson, 2017), the lack of which may negatively impact students' capacity to grasp a variety of math concepts (Stigler, Givven, & Thompson, 2013). Because I specifically designed the music theory lab using NCAT strategies for quality improvement using course redesign, a separate discussion is dedicated to that concept.

Quality Improvement Strategies for Course Redesign

NCAT (2017d) is a nonprofit organization focused on promoting improved student learning through course redesign that includes information technology. The organization functions through financial support from government and private agencies (NCAT, 2017d). Since 1999, the organization has conducted four national level programs: Program in Course Redesign, Roadmap to Redesign, Colleagues Committed to

Redesign, and Changing the Equation, the latter which was focused entirely on the redesign of developmental math courses (NCAT, 2017d).

As part of the Program in Course Redesign, NCAT (2017b) developed six specific redesign models: supplemental model, replacement model, emporium model, fully online model, buffet model, and linked workshop model. Overall, the supplemental model, replacement model, emporium model, and fully online model, respectively, decrease the amount of time students spend in the classroom (NCAT, 2017b). In the supplemental model, the basic course structure remains intact, and supplemental technology-based materials are used to provide students with additional support (NCAT, 2017b). In the replacement model, the number of class meetings is reduced, and in-class time is replaced with online learning activities that require student interaction (NCAT, 2017b). In the emporium model, all in-class lectures are eliminated, and students work in a lab setting to complete individualized online assignments generated by instructional software (NCAT, 2017b). In the fully online model, students complete their coursework entirely online using elements of the supplemental, replacement, and emporium models (NCAT, 2017b).

Unlike in the supplemental, replacement, emporium, and fully online models, in the linked workshop model, the basic classroom structure remains intact (NCAT, 2017b). Learning that occurs in the classroom is supported by a variety of in-person and online workshops facilitated by supervised students who have successfully completed the course during previous semesters (NCAT, 2017b). Unlike any of the other models, the buffet model incorporates practices from other models as appropriate to customize support for the particular learning needs of individual students (NCAT, 2017b).

With regard to developmental math course redesigns in particular, the incorporation of learning modules allows students to focus on fewer math concepts at a time and only on the math concepts they do not understand fully (Bickerstaff, Fay, & Trimble, 2016). In addition, the use of diagnostic assessments allows students to skip material they already know, and the overall structure of the module-based developmental math course allows students sufficient time to learn the concepts before being required to move on to other concepts (Bickerstaff et al., 2016). Allowing students to skip concepts they already know and focus on those they do not know, may help reduce the time the students spend in remediation (Bickerstaff et al., 2016).

In addition to the six specific redesign models, NCAT (2014) also provided a basic framework of design elements essential for successful course redesign. There are eight essential elements:

- Element #1: Redesign the whole course and establish greater course consistency.
- Element #2: Require active learning.
- Element #3: Increase interaction among students.
- Element #4: Build in ongoing assessment and prompt (automated) feedback.
- Element #5: Provide students with one-on-one, on-demand assistance from highly trained personnel.
- Element #6: Ensure sufficient time on task.
- Element #7: Monitor student progress and intervene when necessary.
- Element #8: Measure learning, completion, and cost. (NCAT, 2014)

Because these eight design elements are general in nature, they may be applied in diverse educational settings to support various institutional structures and unique student learning needs. They also may be applied when the course redesign includes modularization of the course content.

Impact of Course Redesign on Student Outcomes

The focus of this section is how course redesign may positively impact student outcomes. This discussion is useful for understanding how course redesign might lead to changes in student outcomes that may reduce the high rates of student withdrawal and failure in Music Theory I at MDU. In other words, this discussion provides insight into how the literature supports the appropriateness of the chosen project genre for addressing the problem in this study.

During the process of implementing its four national level programs (i.e., Program in Course Redesign, Roadmap to Redesign, Colleagues Committed to Redesign, and Changing the Equation), NCAT's (2017d) redesign models and methodology were implemented in by 156 postsecondary institutions. For 72% of those institutions, student learning outcomes improved, and "28% showed equivalent student learning. . . . Other positive outcomes included increased course-completion rates, improved retention, better student attitudes toward the subject matter and increased student and faculty satisfaction with the new mode of instruction" (NCAT, 2017d, para. 5). Once reason that student outcomes may have improved at these institutions after implementing course redesigns is that the redesigned courses included online learning, which Ashby, Sadera, and McNary (2011) found to be superior to face-to-face learning for students in developmental math courses. Institutions that participated in the four national programs also reported

decreased costs for instruction ranging from 5% to 81%, with an average decrease of 34% (NCAT, 2017). These results demonstrate the potential for positive outcomes in similar academic settings, such as MDU.

NCAT's (2014) Redesign Elements 2 and 3 were found to be associated with positive outcomes for music theory students. More specifically, in a Canadian study of second-year students in a music theory course, active learning and interaction among students participating in a collaborative group project contributed to positive student outcomes (Ferenc, 2015). In the study, 86% of participants reported being more engaged with the subject matter than before participating in the collaborative project and 75% reported improved metacognitive learning (Ferenc, 2015). One reason for these positive academic outcomes for music majors may be that, in general, interaction between peers promotes student confidence, which in turn may help students feel comfortable seeking additional academic help when needed (Furby, 2016). It stands to reason that if students seek additional help when they needed it, they will be more successful in their academic endeavors (Furby, 2016). Results from these results support the use of at least some of NCAT's redesign strategies for teaching students enrolled in music theory courses.

Challenges Associated With Course Redesign

Despite evidence that redesigned developmental education courses improve student outcomes, course redesign is not without challenges. Designing and implementing alternative models for developmental education may be hindered by a lack of available resources (Kosiewicz et al., 2016). For example, redesign models that incorporate online learning, especially those conducted in lab settings, may require substantial investment for lab space and equipment (NCAT, 2017c). Also, institutions

may be hindered by local or state policies and regulations (Jaggars & Hodara, 2013; Kosiewicz et al., 2016; Park, Tandberg, Hu, & Hankerson, 2016).

Depending on the structure of the redesign, students may struggle to understand how some course requirements, such as class attendance, contribute to their mastery of subject matter content (Ariovich & Walker, 2014). Students in redesigned developmental math courses also may struggle because the online course format lacks structure and therefore is not conducive to students who procrastinate or because the instructional software does not offer thorough, human-like explanations they are accustomed to (Ariovich & Walker, 2014). In addition, students may perceive the redesigned developmental math course to be more demanding than traditionally structured remedial courses in which they had been enrolled previously (Ariovich & Walker, 2014). One reason for the increased sense of demand may be that students often are required to review their test mistakes and demonstrate understanding before being allowed to retake a failed test, a process many students find frustrating and time consuming (Ariovich & Walker, 2014). Finally, the modularized structure of many developmental math course redesigns isolates student learning by particular concept, which may restrict students' ability to make connections between concepts within modules (Bickerstaff et al., 2016). Although challenges to implementing a developmental education course redesign are evident in the literature, the potential for positive student outcomes rendered the use of the strategy as a guide for this study project a wise choice.

Application of Course Redesign Strategies in This Study Project

The application of course redesign strategies in this project was limited in several ways. First, as the director of the Bluegrass Music Degree program at MDU, I was not in

a position to lobby for the redesign of the entire Music Theory I course as prescribed in NCAT's (2014) Redesign Element 1. Also, because the music theory lab was designed to support the learning occurring in Music Theory I and to be implemented with the least amount of impact on financial and human resources, no assessments were incorporated into the structure of the design for the lab as prescribed in NCAT's Redesign Element 4. Further, highly trained personnel were not employed to provide students with one-on-one, on-demand assistance or to monitor student progress and intervene when necessary as prescribed in NCAT's Redesign Elements 5 and 6, respectively.

Despite these limitations, NCAT's prescribed redesign elements are evident in the design of the music theory lab. For example, the teaching assistants who will facilitate the music theory lab will be students who have successfully completed Music Theory I and who are training to be music educators. Therefore, they are aptly suited to provide students with one-on-one, on-demand assistance (Redesign Element #5) in the role of music theory lab facilitator, a role that does not require the teaching assistants to be responsible for organizing or developing lessons or lesson content. Also, although the teaching assistants are not responsible for assessing students or monitoring their progress (Redesign Element #7), they may provide students with verbal praise and encouragement that may help students stay on task (Redesign Element #6) and in turn be more productive during lab time. In addition, the online music theory lab activities and exercises and the advanced practices opportunities (i.e., ear training tutorials, online music theory website, and music notation software) promote active learning (Redesign Element 2), the discussion activity and student lounge provide a means of increasing interaction among students (Redesign Element 3), and the online resources provide

prompt automated feedback (Redesign Element 4). Finally, as part of the evaluation process for this project, improvements in student learning, as inferred by improvements in student achievement in Music Theory I, will be assessed as prescribed in NCAT's Redesign Element #8.

Adult Learning Theory

The population for whom the music theory lab was developed is students at MDU required to take Music Theory I. Most of these students will be students who enter college directly out of high school and therefore will be 18 years of age or older. Therefore, all students in this study will be considered adults. For this reason, the music theory lab was designed considering the principles of the adult learner, and this concept is discussed here.

The concept of adult learning often is referred to as *andragogy* (Knowles, 1980). The theory of andragogy was based on the work of Eduard Lindeman (Knowles, 1957) and was conceived as a means to categorize the characteristics of adult learners, which Knowles (1980) claimed were distinct from the characteristics of child and adolescent learners. It has been recognized "as one of the dominant frameworks for teaching adult learning during the past 40 years" (Holton, Wilson, & Bates, 2009). When Knowles (1980) first introduced the concept of adult learning, he described four characteristics of adult learners: (a) self-directed, (b) experienced, (c) ready to learn, and (d) orientated to learning. These characteristics mean that adult learners (a) prefer to and are capable of being autonomous learners who direct their own learning opportunities , (b) have varied levels of experience related to the topic of the learning opportunity, (c) have an interest in learning, and (d) perceive learning to be purpose driven (Knowles, 1980). Soon after

introducing those four principles, Knowles (1984) introduced another: motivated. In this regard, Knowles (1984) explained that adult learners are essentially intrinsically motived to learn. In a more recent update, a sixth principle was added: the learner's need to know (Knowles, Holton, & Swanson, 2015). In other words, adult learners need to understand the reason for learning what they are learning.

Reorganized, in some cases restated, and in most cases expanded from the originals, the current six principles of adult learning are (a) "the learner's need to know, (b) self-concepts of the learner, (c) prior experience of the learner, (d) readiness to learn, (e) orientation to learning, and (f) motivation to learn" (Knowles et al., 2015, pp. 4-5). Based on these principles, adult learners are experienced and autonomous learners who are motived and ready to learn when that learning will have value in new contexts and provided that they understand the purpose for learning (Knowles et al., 2015). A variety of factors may influence the degree to which these adult learner characteristics impact behavior and learning (Knowles et al., 2015).

The six principles of adult learning may be interpreted as cognitive patterns of learning (Davis, 2012), which determine the way adults perceive learning experiences, interpret new knowledge, and apply that knowledge in other settings (Connor, 2012). Adults' individual and situational differences, differences in their goals for learning (Knowles et al., 2015), and differences in their capacities for self-reflection impact adults' cognitive patterns and thus the way they behave and learn (Connor, 2012).

Application of Adult Learning Principles in This Study Project

During the development of the music theory lab, I considered the needs of the adult learning as they are expressed in the six principles of adult learning described by

Knowles et al. (2015). Design elements of the music theory lab demonstrate the application of those principles in the study project. In this section, I discuss those project design elements and the principles to which they apply.

According to the first principle of the adult learner, adult learners have a need to understand the value of the learning experience in which they are engaging. The value of the music theory lab for students is obvious. Consistently, students at MDU have not succeeded in Music Theory I. In addition, students have expressed a need for additional help, in some cases explicitly in the form of a music theory lab. After considering these factors, I reasonably conclude that the students who participate in the music theory lab would find value in doing so. However, to call students' attention to the potential value of the music theory lab, the purpose of the lab, to help students better understand the concepts they are learning in Music Theory I, is clearly stated on the student greeting page on Blackboard. Also, the national standards for student learning in music theory are available via a tab in the navigation pane on the music lab page. Understanding that the concepts they are learning in Music Theory I, and consequently in the music theory lab, will help them meet those national standards also may contribute to the value they perceive in the participating in the music theory lab.

According to the second principle of the adult learner, adult learners approach learning opportunities with specific self-concepts. Essentially, adult learners are autonomous learners who prefer to direct their own learning opportunities. To some extent the weekly music theory lab lessons can be considered self-directed because students will choose the printable exercises they will complete, the tutorial activities and discussions in which they engage, and the guides that they will use. Also, to some extent,

students participating in the music theory lab can be considered autonomous learners because students are not bound by assignment completion or submission deadlines nor are they bound by the time schedule of the lab course. Once the weekly learning modules are uploaded to Blackboard, they will remain accessible to students who may then log in and engage in the provided learning materials at any time that is convenient for them. By providing students in the music theory lab opportunities to make decisions, within the structured framework of the music theory lab, regarding with what course material they engage and how and when they engage with that material, the music theory lab addresses specific self-concepts of the adult learner.

According to the third principle of the adult learner, adult learners have prior experiences that they bring with them to new learning opportunities (Knowles et al., 2015). The design of the music theory lab demonstrates consideration of differences in students' levels of prior experience. As indicated in the results of this study, some students arrive to Music Theory I with specific music knowledge, including how to read music and play an instrument. However, other students have never participated in a school band or a musical ensemble, and as a result, can neither play an instrument nor read music. Although some students may have experience playing a bluegrass instrument, typically those students cannot read music because they learn to play their instruments by ear. Also, some students arrive to Music Theory I with an understanding of fundamental music theory concepts such as pitch, rhythm, scales, intervals, chords, and harmony. Other students do not possess this knowledge because they have not taken music theory courses prior to being enrolled in Music Theory I.

As the director of the Bluegrass Music Degree program at MDU during the time of this project, I also was personally aware of differences in students' levels of prior experience, including those related to their overall academic capacity. For example, some students enrolled in Music Theory I at MDU were students considered to be at-risk because they earned low scores on the standardized assessments used for admissions purposes. Many of those student were enrolled in either a developmental math course, a developmental English course, or both during the same semester in which they were enrolled in Music Theory I.

Inevitably, students with these varied backgrounds will have unique interpretations of the challenges to success in Music Theory I and require different types and levels of support. In response to this understanding of the prior experiences of the students in the music theory lab, multiple printable exercises are included in each weekly learning module. Students with less experience with the concepts introduced in that week's lesson may complete the less challenging exercises, and students with more experience with the concepts introduced in that week's lesson may complete the less challenging exercises quickly as a review before moving on to the more challenging exercises or may skip directly to the more challenging exercises. In addition, each week's lesson includes a discussion prompt to encourage students to engage in more critical analysis and conceptual application of the topics covered in that week's lesson. Students also may have open discussion in the online study lounge, although no discussion prompts are provided there. In addition, students looking additional challenges may access links to advanced training opportunities. By providing numerous practice exercises, and activities and practices exercises that vary in the degree to which they

challenge students, the design of the music theory lab addresses the unique levels of prior experience each student brings to learning experiences in the music theory lab.

According to the third, fourth, and fifth principles of the adult learner, adult learners value learning that is purposeful for them, which motivates them to learn and thus to be ready to learn when they engage in new learning opportunities. The design of the music theory lab demonstrates consideration of these adult learning principles. Although the idea of purposeful learning for adults is typically associated with adults in the workplace and although it may be intuitive to discuss the purpose and value of adult learning in those terms, this principle also is applicable to adult students. One aim for enrolling in a college course is to gain knowledge. Student may seek knowledge for their own personal interest in the subject matter introduced in the course or may complete the course as part of the requirements for a degree. Because of the demanding nature of Music Theory I at MDU, it is unlikely that students enrolled in the course are enrolled strictly for personal interest. More likely, students enrolled in Music Theory I are enrolled in the course to fulfill a requirement for a degree. In this sense, students would perceive the purpose of the music theory lab to be to help them reach that goal and thus find value in participating in the lab. If students perceive the purpose of the music theory lab to be applicable to them, they will be motivated to learn and thus come to the lab ready to learn.

Students participating in the music theory lab also may be motived by the interactive nature of the online activities and advanced training opportunities, which provide immediate feedback on students' work. When students are successful, that immediate feedback will become a mastery experience that can help build students'

levels of self-efficacy, which in turn motivate students to continue learning. When students are not successful, that immediate feedback provides students with real-time direction for their learning so that they may most effectively focus on their areas of weakness related to the content material and its application. In these ways, the immediate feedback provided by the online resources can be motivating to all types of students.

Project Description

This section includes a discussion about the resources needed to implement the music theory lab and the existing supports that may contribute to its successful implementation. Potential barriers to the successful implementation of the music theory lab and potential solutions to those barriers also are discussed. A proposed timeline for the implementation of the music theory lab and an explanation of my roles and responsibilities in the implementation processes also are included.

Needed Resources and Existing Supports

Resources needed for this project can be discussed according to whether they are needed for the development of the music theory lab itself or for the actual implementation of the lab. To develop the music theory lab, I needed access to the Music Theory I curriculum and course content materials to support that curriculum (content tutorials, topic guides, online activities, printable exercises, discussion prompts, and advanced tutorial opportunities). Additionally, I needed access to supplemental materials indirectly related to music theory content (course syllabus, national standards, and extra materials). Finally, I needed a platform for hosting the music theory lab.

Fortunately, everything I needed to develop the music theory lab was easily accessible. The instructor of Music Theory I at the time I developed the music theory lab

supplied me with the Music Theory I curriculum, and BlackBoard was already in place at MDU as the school's student information system. In addition, with the exception of the discussion prompts that I created myself, the course content material was freely accessible online from various sources. The content tutorials came from FiveMinuteMozart© and the Finale® software, the topic guides came from TobyRush.com, the online activities came from Teoría©, the printable exercises came from the Finale® software, and the ear training tutorials offered in the advanced tutorial opportunities came from musictheory.net.

With the exception of the course syllabus that I created myself, the supplemental materials came from the Finale® software. The extra materials (lesson plan template, manuscript papers, practice record, and tab manuscript) also came from the Finale® software. The national standards for music education came from the National Association for Music Education.

To implement the music theory lab, additional resources are needed. First and foremost, a physical location for the music theory lab is needed on the MDU campus. That location must have enough computers to accommodate the students enrolled in Music Theory I each semester. Each computer also must be loaded with the Finale® software. Second, faculty support is needed. In particular, the Music Theory I instructor must be willing to oversee the reporting of student attendance by the teaching assistants facilitating the music theory lab. Also, the music education instructor must agree to recruit students to participate as teaching assistants and facilitators in the music theory lab each semester, potentially by requiring participation, as well as be willing to manage the scheduling of teaching assistants for the lab. Third, administrative support is needed.

Specifically, the music theory lab must be approved conceptually by the chair of the fine arts department, approved as an online course by MDU, and included in MDU's course catalog through the registrar's office.

Supports for the resources needed to implement the music theory lab also exist at MDU. First, there is a computer lab on MDU's campus designated solely to the music department for piano practice. The *piano lab,* which houses 10 workstations and computers loaded with the Finale® software, could be used for the music theory lab. Because the lab would be scheduled for less than 3 hours total per week, there would be minimal impact on overall student access to the piano lab. Second, both the music theory lab instructor and the music education instructor have expressed their support for the music theory lab and intimated that they would be willing to fulfill their roles as necessary for the successful implementation of the music theory lab. Third, because the chair of the fine arts department served as the peer debriefer for this study, he was well-informed about the direction of this project before I began to develop it. From the beginning, he expressed his support for implementing the music theory lab at MDU. Approval to offer the course online should be granted without incident provided I properly complete the necessary request forms and submit them to the information systems specialist as required by MDU policy. Inclusion of the music theory lab in the course catalog also can be achieved by the completion of appropriate forms and their submission to the registrar's office.

As mentioned previously, no financial resources will be needed. I have developed the course and created the course syllabus. The additional course content and supplemental materials were freely available online and through the Finale® software.

Because the piano lab may be used for the music theory lab, no additional space is needed and no additional computers or software seats need to be purchased. Because the lab will be facilitated by teaching assistants, no additional paid instructors will be needed.

Potential Barriers and Solutions to Barriers

The concept of implementing a music theory lab to support students enrolled in Music Theory I at MDU has been positively received by the key stakeholders necessary to successfully implement the lab, in particular, the Music Theory I and the Music Education instructor, the chair of the fine arts department, and the college president. Also, the process by which a new course may be added at MDU is relatively simple. Therefore, I anticipate that the music theory lab will be approved for implementation upon first consideration. However, one potential barrier to the implementation of the music theory lab at MDU is that approval of the lab may be delayed and thus the music theory lab will not be implemented in the fall of 2018 as planned. During the semester in which the last sections of this study were being completed, a new president was appointed at MDU. Since his appointment, the president has made substantial changes in staffing assignments, and there is a strong potential that he may continue to do so in the coming months. One result of these changes could be that new staff members take longer to complete tasks for which they are responsible and for which they may not be familiar. These tasks may include processing the new course request, entering the course information into the school catalog, or officially enabling the course in Blackboard. If a delay in course approval occurs, I may be able to appeal to the new president for help expediting the process. The new president has shown a special interest in the Bluegrass

music program at MDU, and I anticipate he would be supportive of needs with regard to expediting the new course approval and online activation processes.

One potential barrier to the successful implementation of the music theory lab at MDU is that the some teaching assistants may not be highly knowledgeable about the concepts covered in the curriculum. Although the teaching assistants must be students who passed Music Theory I, students may pass the course with a C grade, which means that some students may be more knowledgeable than other students about the concepts for which they are responsible for tutoring. In these cases, the students in the music theory lab may not receive the additional help they need to successfully grasp the music theory concepts included in any particular weekly lesson if the tutorials and other provided materials are insufficient to support student learning. Essentially, this potential barrier already has been considered and a solution has been built into the design of the music theory lab. First, the teaching assistants will be juniors and seniors in the music education program who typically have also advanced through Music Theory II and III and thus should be knowledgeable about the concepts from Music Theory I, which need to be understood and applied properly in order to pass Music Theory II and III. Second, because two or three teaching assistants will be assigned to each music theory lab, it is likely that at least one of the teaching assistants will be able to answer any given student's question. However, it also is possible that the chair of the fine arts department would approve the purchase of one or more teacher edition books used for Music Theory I that could be made available for the teaching assistants should they need an information resource.

Proposed Plan for Implementation

When a faculty member wants to introduce a new online course at MDU, he or she must present the course plan to the members of his or her department who review the plan and vote on whether or not to move the plan forward. If the course, in any form, has not previously been taught at the institution, the faculty member also must present the course plan to the curriculum committee. The committee meets twice per semester. If the department, and if needed the curriculum committee, agree on the worthiness of the course, the department chair manages the completion of a new course application. The instructor of the proposed course must complete Section 1 of the application, which includes only fundamental information about the instructor and the structure of the proposed course. The chair of the fine arts department completes Section 2 of the application, indicating that the course content supports the approved course objectives and that the chair approves the course offering. The chair of the fine arts department then forwards the application to the vice president of academic affairs who completes Section 3 of the application, indicating that the course is approved for development.

Once the faculty member has finished developing the course, it is reviewed by an instructional technologist from the office of technology and by the department chair, who both then complete an online course approval form indicating that the course meets the college's expectations ($N = 15$) for online courses. If any of the expectations are rated as *needs improvement*, the faculty member must make improvements as necessary. When all of the expectations for online courses have been met, the chair of the department forwards the signed online course approval form to the provost for final approval. After the course is approved by the provost, the approved application is forwarded to the

registrar's office. Approved applications for courses received by the registrar before Week 6 of the semester are eligible for inclusion in the following semester's course catalog.

Because the music theory lab course I developed for this project technically already exists as part of Music Theory I, I did not need approval from the department members or the curriculum committee. Rather, in September of 2017, I worked directly with the chair of the fine arts department who approved the development of the music theory lab. Once the lab is fully developed, however, I still will need approval from the office of technology, the chair of the fine arts department, and the provost. The office of technology also will need to activate the lab course in Blackboard. Finally, because the music theory lab will need a course description in the course catalog, I will need to forward my course approval form and a course description to the registrar's office.

I plan to submit my final course plan and the online course approval form to the technology specialist and the chair of the fine arts department by the end of February 2018. I anticipate that they will review the application within 2 weeks and forward it to the provost, who likely will approve the course within a similar time frame. Although realistic, this approval timeline will not allow me to deliver the course approval and description to the registrar's office before the 6 week deadline for inclusion in the course catalog. To ensure that the course will be available to students in the fall of 2018 and published in the online student catalog beginning in April 2018, I will request special permission from the college president to submit the course description to the registrar's office before the 6 week deadline and prior to receiving official permission to implement the course. Because I have been working closely with the college president to promote

the Bluegrass program at MDU, he is fully aware of the proposed music theory course, the course content, and the logistics of implementing the course. I anticipate that the president will support this process exception and my approval to offer the music theory lab course online will be granted without incident. Because the course should be officially approved by March of 2018, I will be able to begin advertising and promoting the course at that time. I plan to advertise the lab in the school's music program brochure and promote it during annual auditions in April and student advising meetings in May.

Roles and Responsibilities

My roles and responsibilities in this study were numerous. My primary role in this study was that of a doctoral student. In that role, I was responsible for promoting my own learning while simultaneously developing my study. My second role was that of the researcher. In that role, I was responsible for familiarizing myself with the literature pertaining to my topic but also for conducting my own research through data collection and analysis. My third and final role was that of project developer. In that role, I was responsible for deciding how my study findings could be applied in a project that could contribute to positive social change at the study site. Although I also was responsible for conceptualizing and developing the music theory lab as the project for this study, some outside support was needed.

First, I needed to gain the support of the chair of the fine arts department to develop the music theory lab as part of my doctoral study without having to seek official approval for implementing a new course at MDU. I received approval from the chair of the fine arts department for implementing a new course in September 2017. Second, in order to develop the music theory lab using BlackBoard, I needed to ask the technology

department to provide me temporary workspace. The technology department provided me temporary workspace in October of 2017. Third, in order to have a full understanding of the content of Music Theory I, I needed to gather course materials from the Music Theory I instructor. I gathered course materials from the Music Theory I instructor from October through December 2017.

Once I complete my doctoral study at Walden University, I intend to implement the music theory lab at MDU. At that time, I will assume the role of an MDU faculty member. I will be responsible for ensuring that the new music theory lab course at MDU receives official approval as a new course. As outlined in the previous section, the process for seeking course approval will be abbreviated. I will not need to introduce the new course plan at a department meeting or to the curriculum committee, or complete a new course application. However, an online course approval form will need to be completed by an instructional technologist from the office of technology and by the department chair. I, however, will make myself available to answer any questions the instructional technologist or the department chair may have and take responsibility for ensuring the form is completed properly and expeditiously. Finally, I will follow up to ensure that the completed form is delivered to the provost for final approval and then to the registrar's office for inclusion in the next semester's course catalog.

Once the course is approved and until the first day of classes in the fall of 2018, I will assume the role of faculty advisor. In this role, I will take on the responsibility of meeting with the music education instructor to offer support with regard to the logistics of providing teaching assistants for the music theory lab sessions. At that time, I also can answer any additional questions the music education instructor may have regarding his

role in the implementation of the music theory lab course. In addition, I will meet with the Music Theory I instructor to answer any questions he may have regarding his role in the implementation of the music theory lab course. I will continue to assume the role of faculty advisor during the initial semesters in which the music theory lab is implemented. During that time, I will follow up with the Music Theory I instructor and the music education instructor to ensure that the music theory lab is being implemented properly and without logistical or administrative issues.

Finally, at the end of the first semester in which the music theory lab is implemented, I will assume the roles of evaluator and presenter. As an evaluator, I will take on the responsibility of determining if student outcomes in Music Theory I improved after the implementation of the music theory lab. Specifically, I will be interested in whether rates of student withdrawal and failure decrease. A full discussion of the project evaluation plan is presented in the next section. As a presenter, I will report findings to the key stake holders: the music department chair and faculty, the fine arts department and faculty, and the vice president of academic affairs. Likely forums for presenting the evaluation findings include faculty and committee meetings. If results indicate that student outcomes improved as the result of the implementation of the music theory lab, I also will share my findings with students as part of the student recruitment process. See Appendix I for a complete timeline of the project process steps associated with the development and proposed implementation of the music theory lab course at MDU.

Project Evaluation Plan

The general purpose of an evaluation, which should be structured and systematic, is to gather feedback about something in order to make an informed assessment of some

kind (Trochim & Donnelly, 2008). Evaluations may be grouped into two basic categories, formative assessment and summative assessment (Trochim & Donnelly, 2008). Formative assessments are conducted while the thing being assessed (e.g., problem, issue, protocol, program) is being developed or implemented so that the thing itself may be changed to improve it (Trochim & Donnelly, 2008). Although formative assessments may be used for medical protocols and scientific experimentation, formative assessments often are used to evaluate programs and may be focused on the program's needs, conceptual structure, delivery processes, and fidelity of implementation (Trochim & Donnelly, 2008). On the other hand, summative assessments are conducted after the thing being assessed has been developed or implemented (Trochim & Donnelly, 2008). Summative assessments also may be used to assess programs and may be focused on (a) a particular outcome of a program, (b) the overall outcome of a program, (c) the cost effectiveness of implementing a program, (d) options for other approaches to addressing the underlying problem that originally prompted the implementation of the program, and (e) contributing to an overall understanding of the viability of a solution in conjunction with other evaluative data (Trochim & Donnelly, 2008).

For the project in this study, I will conduct a summative assessment. Specifically, I will conduct an outcome evaluation to determine whether the implementation of the music theory lab helps improve student outcomes in Music Theory I. The purpose for implementing the music theory lab is to improve student outcomes in Music Theory I; therefore, it makes sense to conduct an outcome evaluation to determine if that purpose is achieved. Students' achievement grades in Music Theory I can be used to evaluate the success of the music theory lab. Student grades from the semester prior to the

implementation of the music theory lab can be compared to student grades from the semester in which the music theory lab is implemented. If there appears to be improvement in student outcomes after the music theory lab is implemented, evaluations over subsequent semesters may be used to confirm initial findings. If there does not appear to be an improvement in student outcomes after the music theory lab is implemented, other options for improving student outcomes may be considered.

The results of this evaluation will be of interest to a variety of stakeholders at MDU, including students, instructors, and administrators. I anticipate that the new president, who is heavily focused on efficient and cost-effective changes at MDU that can bring about immediate positive change for students and the college, will be especially interested in finding out whether student outcomes improve in Music Theory I after the implementation of the music theory lab. Outcomes of this evaluation also may be of interest to music theory instructors in other settings. Although it is understood that results of the implementation of the music theory lab at MDU will not be a guarantee of any particular outcome in another educational setting, music theory instructors in other educational settings may use the results of this study as a starting point for making changes in their own locations.

In addition to the summative evaluation, I also will consider student feedback collected by MDU as part of its regular end-of-semester course and instructor evaluation process. Although the music theory lab will be offered as part of Music Theory I, because each of the three lab sessions will have its own session number, students will be able to complete an evaluation for the music theory lab separate from the evaluation for Music Theory 1. This separation will help protect the Music Theory 1 instructor from any

potentially negative feedback the students in the lab my provide. Also, it will ensure that any feedback received from the students can without question be understood to pertain to the lab portion of the course. Feedback garnered from students via the course and instructor evaluation form could provide insight about students' personal experiences with the music theory lab that could be helpful when considering its value and ways to improve the presentation of the course and its contents to best support student learning.

Project Implications

This project has the potential to improve student outcomes at MDU. Specifically, the music theory lab was designed to help students better understand the music theory concepts to which they are introduced in Music Theory I. If students better understand the music theory concepts to which they are introduced in Music Theory I, they are likely to perform better in the course. If students perform better in Music Theory I, they will be less likely to receive academic probation and less likely to have to repeat the course (Music Department Chair, personal communication, October 3, 2016). In addition, they will be more likely to remain in their current music program, to be able to enter the music education program on time, and to graduate on time (Music Department Chair, personal communication, October 3, 2016). In all cases, these scenarios represent improved outcomes for students and potential for positive social change.

This project also may have value at the college level. If student outcomes in Music Theory I are improved and students remain in school to complete their degrees, MDU will benefit financially through the additional tuition from students who otherwise may have left the school. Also, if more students in Music Theory I pass the course and continue with their studies through graduation, MDU will be able to advertise higher

graduation rates, thus making the school and its music program more marketable to potential students, potentially further increasing student enrollment and income through tuition.

Finally, this project may have value in the larger context of academia. Because this project was developed based on the results of a qualitative study of a nonrandom sample, the outcomes are not generalizable to other settings. However, results from this study may prompt music educators and administrators in other institutional settings to conduct their own research to explore student needs in their music programs. Also, those music educators and administrators may use the music theory lab developed for this study as a model for the development of their own music theory lab, which they could adapt to meet the needs of students in their own unique settings. In this way, this project may have implications in the larger educational context.

Section 4: Reflections and Conclusion

The purpose of this study was to explore the challenges faced by first-semester-music-program students enrolled in Music Theory I at MDU. The desired outcome was a better understanding of those challenges that could be used to guide the development of a project intended to alleviate some of those challenges and potentially contribute to improved student persistence and course completion. Results from the study showed that students encounter a variety of challenges to success in Music Theory I, including challenges related to academic preparedness and their personal characteristics. Consistently, students noted the need for additional help, and both students and instructors suggested various ways in which that help could be provided. The suggestion to offer students a music theory lab was acted upon for this study's project. The rationale for this choice was well-established in the previous section as was the description of the project and the deliverable. Therefore, in this section, I present my personal reflections and provide concluding statements. In particular, I reflect on (a) the project's strengths and limitations; (b) alternative approaches for addressing the study problem; (c) scholarship, project development, and leadership and change; (d) the overall importance of the work; (e) implications and applications of the study and project; and (f) recommendations for practice.

Project Strengths

While reflecting on this project's strengths, I considered strengths to be any elements, structures, or characteristics of the project that render it suitable for addressing the study's problem in some way. The problem in this study was that first-year-music-program students at MDU consistently withdrew from or failed Music Theory I. Thus, to

address this problem, the study project would have to, in some way or to some degree, help students be more successful in the course so that they would remain in the course and pass it. To this effect, I have identified a variety of elements, structures, and characteristics of the music theory lab that are likely to help students be successful in Music Theory I, and therefore, can be considered strengths of the project.

Use of Student Feedback

The greatest strength of this project is that it emerged from student feedback generated during data collection. Because students themselves stated that they would benefit from having more help, specifically in a lab setting, the development of a music theory lab directly addresses a student-identified need and can be expected to help students be more successful in their Music Theory I courses. Therefore, I consider this characteristic of the project not only a strength but one of the project's greatest strengths.

Use of Established Concepts and Models

What I consider to be the project's second greatest strength is that it was structured around concepts and models identified in the literature. In particular, as discussed at length in Section 3, the lab was developed in consideration of characteristics of adult learners identified by Knowles et al. (2015), including the need to be self-directed learners in a student-centered environment, and using guidelines for teaching developmental learners created by NCAT (2017b, 2017c), including the use of technology in lab settings. Because adult learners and developmental learners have unique learning needs, it stands to reason that a learning opportunity developed around those unique needs will best help those students learn. Furthermore, the music theory lab was designed using a variety of teaching approaches as suggested by Bonham and Boylan

(2011). By using multiple teaching approaches in the music theory lab, the greatest number of student learning styles can be supported. Because the structure of the music theory lab was based on tested theories and models of learning that have been shown to effectively promote learning, I consider the project's structure a strength.

Low Cost and Convenience

Other elements of the music theory lab that can be considered strengths are its low cost and its convenience. Because the delivery platform and technology needed for the music theory lab already are in place at MDU, no additional cost will be incurred for these purposes. Further, because the music theory lab is self-directed and technology based, it will not be taught in the conventional sense. For this reason, MDU students in the music education program may serve as lab facilitators, thus eliminating the need to pay for additional staff. Using MDU students as lab facilitators also will help keep the additional workload posed by the music theory lab to a minimum for the Music Theory I instructor. In addition to the value of these elements in and of themselves, the low cost and convenience of implementing the lab can be considered strengths because they are likely to enhance the value of the project from the perspective of administrators at MDU, a condition that could logically be assumed to increase the potential that the administrators will approve the implementation of the music theory lab. Because improved student outcomes resulting from participation in the music theory lab cannot occur unless the lab is implemented, I consider the low cost and convenience of the lab both overt and underlying strengths of this project.

Limitations

Although I recognized multiple strengths of this study's project, I also recognized limitations. One limitation is that some students enrolled in the music theory lab may not have the self-motivation to spend their lab time engaged in productive learning. If students do not spend their lab time engaged in the learning exercises, their knowledge of music theory concepts and their applications are not likely to improve, in which case participation in the music theory lab will not be beneficial. However, it is possible that the lab facilitators and the motivated students in the lab may be able to encourage those students who lack motivation to make the most of the lab time they are offered, thus mitigating the impact of this potential limitation.

A second limitation, that some teaching assistants might not be highly knowledgeable about the concepts covered in the music theory lab curriculum, was discussed in Section 3 as a barrier to implementation. In cases in which a teaching assistant may not be highly knowledgeable about the concepts covered in any particular lab session, students in the music theory lab may not receive additional help they need with the lab tutorials and practice exercises. However, the concepts presented in the music theory lab will not be new to the students. By the time they are engaging with the material in the lab, they already will have been exposed to the material in Music Theory I. Because they will not be learning new material, the tutorials and practice exercises provided in the lab should be sufficient to enhance student learning and essentially require little help from the lab facilitators to begin with. Moreover, if a student is unable to grasp a particular concept or figure out a solution to a problem for a particular exercise, that student may collaborate with other students in the class, move on to other

learning opportunities in that week's lab exercises and activities, or get additional help from the Music Theory I instructor during the next meeting of Music Theory I. For these reasons, it is unlikely that lack of specific knowledge of some teaching assistants will negatively impact student learning in the music theory lab.

Recommendations for Alternative Approaches

The problem identified in this study was that first-year-music-program-students at MDU consistently withdrew from or failed Music Theory I. However, a variety of factors may impact students' withdrawal from and failure in college-level courses, such as preparation for college, demographic characteristics, student characteristics, personal factors, and support from others. Those factors, and specific associated variables, may have been used to frame the problem for this study. The following are some examples of problem statements based on factors that may impact students' withdrawal from and failure in college-level courses:

- Students arriving at MDU are not prepared for the challenges of Music Theory I.
- Lack of student preparation for college may be impacting student success in Music Theory I at MDU.
- Student age and ethnicity may be impacting student success in Music Theory I at MDU.
- Student characteristics (habits, skills, levels of self-efficacy) may be impacting student success in Music Theory I at MDU.
- Students' personal factors may be impacting their success in Music Theory I at MDU.

- Lack of support from others (e.g., campus support and institutional support) may be impacting student success in Music Theory I at MDU.

Although all of these problem statements theoretically could have been used as the foundation of this study, they were less appropriate than the one I chose because they addressed problems associated with students prior to their arrival at MDU. For logistical reasons, prompting change among students in environments out of my control as a student researcher and instructor at MDU would have been extremely challenging and potentially impossible. The problem identified in this study, that first-year-music-program students at MDU consistently withdrew from or failed Music Theory I, was a problem associated with students after they arrive at MDU and one over which I had some degree of control as an instructor at MDU.

Based on the results of this study, alternative approaches to solving the study problem could have been pursued. Alternatives included implementing a more lenient absentee policy, slowing the speed of the class, changing the class start time, and reducing the class size. As explained previously, these solutions, although potentially effective, were not likely to be approved by MDU administrators for logistical and financial reasons. Alternatives also included developing a mentorship program or a tutoring program. However, it would be difficult to control for quality of mentorship or tutoring in such programs. Although I did consider these options for solving the study problem, I determined that their drawbacks outweighed their potential to prompt change and thus opted to develop the music theory lab as a means of addressing the study problem.

Analyses of Learning

Through the development of this project, I learned many things about myself as a scholar, a project developer, and a practitioner in a position of leadership focused on enacting change. In this section, I discuss these topics in relation to my personal learning and growth. This discussion is specific to the research and development associated with the project.

Scholarship

Fuller (2010) distinguished scholarship as a process distinct from discovery and research. Whereas discovery is focused on the uncovering of something that was in some way lost or hidden and research is focused on the process involved in and effort expended on investigating something, scholarship is focused on the scholar and that scholar's capacity to collect, sort, and judge the value of sources in a way that renders the scholar an authority on the topic and expert in his or her field (Fuller, 2010). As an authority and expert, a scholar often serves in a public capacity by sharing his or her conclusions with various audiences with interest in the topic (Fuller, 2010). Although distinct from one another, discovery, scholarship, and research are all essentially linked and related to aspects of inquiry and knowledge, as is the dissertation process (Fuller, 2010).

For the reasons Fuller (2010) described, learning about scholarship was unavoidable as I completed this project study. First, I learned the importance of using findings from one's own study in combination with the literature to develop a project that is well-aligned with the needs of one's project site. This alignment allowed me to make a clear connection between the study problem and the resulting project I developed to address that problem. Second, I learned that conducting a literature review can be

challenging in a specialized field such as music where little literature on the topic is available. Third, I learned that the dissertation review process is essentially flawed. Because multiple reviewers critique the document without interacting or communicating with each other, the process often results in conflicting feedback that is challenging and time consuming to rectify. Ideally, a student's committee members and the university reviewer should make comments on each version submitted for review and conference with each other to come to some consensus as to the changes they all agree need to be made before the feedback is given to the student. Although this process would be logistically challenging for the committee members, it would be indescribably valuable for the student.

In addition to encouraging learning on my part, the process of developing this project has helped me grow personally. Specifically, I have learned to be more flexible and less particular. I am also better able to recognize the value in my work and have the confidence to defend my ideas. I have become more creative with regard to my thinking about learning, writing, and scholarship. In addition, I have become more comfortable with my role as a researcher and scholar. At the same time, however, I have become more accepting of my imperfections in these areas.

Project Development

Because I developed a project for this study, it was inevitable that I learned something about project development. Specifically, I learned that project development is challenging, time consuming, and iterative. Because I wanted to develop a project that could legitimately be applied in my educational setting, it was important that all aspects of the project be developed not only considering the unique needs of the students enrolled

at MDU but also considering the college's policies for developing a new educational opportunity for students and its procedures for introducing that opportunity. Considering these policies and procedures helped me to develop a realistic project rather than one that, although ideal, would not be approved by the administrators at MDU.

In addition to making the project development process more challenging, considering the college's policies and procedures made the development of the project more time consuming. Because I needed to ensure that the content included in the music theory lab was aligned with the curriculum in Music Theory I, it was necessary to meet with the Music Theory I instructor and discuss the curriculum and the weighted importance of each of the concepts included in the curriculum. Then, when I was locating the student activities and resources for the music theory lab, it was necessary not only to locate activities and resources for each of the specific concepts included in Music Theory I but also to locate activities and resources that would be useful for students with various levels of previous music theory knowledge and experience. Because I do not teach any music theory courses, it was necessary for me to examine each potential activity and resource to determine its value and applicability for the music theory lab. This process was time consuming.

Finally, I learned that project development is an iterative process. When I began to develop the music theory lab, my plan for its development was clearly outlined. However, as I moved forward through the development process, my newly gained knowledge often changed my views of the organization and structure of the lab, which led to additional changes in the plan. In other cases, a change I made in one aspect of the structure of the lab forced me to rethink and then change another aspect of the lab.

Although the iterative nature of the project development process made the entire process time consuming, it also helped to ensure that I developed a well-structured and organized course, which, of course, was the outcome intended for my project.

Leadership and Change

According to Rogers (2003), the speed at which an innovation is accepted and the degree to which an innovation is accepted may be impacted by stakeholders' perceptions of the value of the innovation, the channels of communication used to convey the innovation, the length of time that elapses after the innovation is introduced, and the primary potential users to whom the innovation is introduced. This process of diffusion of innovation also requires a degree of persuasion on the part of the innovator and is dependent on decision making on the part of the intended users of the innovation (Rogers, 2003). Considering these requirements for the diffusion of innovation, people may conclude that change is either highly unlikely or excessively challenging to achieve. However, at MDU, I have not found this to be the case.

Although the music theory lab has not been officially approved or implemented at MDU, the plan has been well-received by the school's administrators, and both the Music Theory I instructor and the music education instructor have shown support for my plan. I believe my success in this regard is the result of my ability to interact respectfully with the administrators and colleagues at MDU as well as my capacity to develop a well-structured course that will be feasible to implement at the school with few needed resources and little support. Because I consider the ability to interact successfully with stakeholders and to deliver services that meet users' unique needs characteristics of a

quality leader, I consider my success in this regard evidence of my potential to be a successful leader of change in a postsecondary school setting.

In addition, I believe my capacity to be a successful leader is underscored by the fact that I put forth the time and effort to develop a working music theory lab course complete with student activities and resources although these elements were not necessary in order to meet the requirements for my doctoral degree. I truly plan to implement the music theory lab developed for MDU and expect that it will have an impact on the student outcomes in Music Theory I. In this sense, I also learned that taking a leadership role can be intrinsically rewarding.

Although I have had a positive experience at MDU with regard to my leadership role and initiating change with regard to student success in Music Theory I, I do recognize that other leadership experiences may not always be so positive and that my ideas for change may not always be so well received. However, through the process of project development for this study, I have learned to be more patient as a leader and to realize that I may not always be able to fix problems as expeditiously as I would like. I believe that this newly found patience and understanding will help me better navigate any negative experiences I may encounter in my future as a leader of change.

Finally, I have learned that leaders of change should not only look outside themselves to initiate change but also look within themselves for opportunities for growth. Although I have always appreciated faculty learning opportunities, I especially appreciated my most recent learning opportunity because I participated in it while I was developing my project for this study and was able to apply what I was learning in the workshop to the music theory lab course I was developing. As a leader at my institution, I

plan to make a conscious effort to remain introspective and look for ways to ensure I remain a valuable asset to all stakeholders at MDU, whether I continue to function as the developer of online courses or in some other capacity.

Reflection on the Importance of the Work

This work as a whole is important for two reasons. First, this study provided me the opportunity to generate new knowledge about students' and instructors' perceptions of the challenges to success in the Music Theory 1 course at MDU and opportunities for improvement. Through this investigation, I learned that students in Music Theory I were not prepared for college. The students (a) lacked overall academic preparedness, (b) lacked preparedness with regard to theory-specific knowledge, (c) found the course material difficult, (d) lacked understanding of expectations at the college level, and (e) lacked maturity. Also, students often do not put forth the amount of effort needed to be successful in the course, sometimes have poor attitudes about the course, and may have unique learning needs. I also learned that the class time was inconvenient, the class pace was too quick, and the class environment sometimes was not conducive to learning. With regard to possible opportunities for improvement, I learned that students and instructors had both feasible and impractical suggestions for helping students become more successful in Music Theory I. The most common feasible solutions were providing students with more practice time and more help. A second, and related, reason this work is important is that the information I generated in my study led to development of the music theory lab, a functional learning opportunity that realistically can be implemented at MDU to promote change in student outcomes in Music Theory I. This idea is discussed

in more detail in the Implications, Applications, and Recommendations for Practice section.

Implications, Applications, and Recommendation for Practice

Implications of this study and resulting project include the potential to improve student outcomes in Music Theory I and the subsequent potential for students to avoid (a) delayed graduation, (b) delayed entrance into the teacher education program, (c) possible financial aid probation or suspension, and (d) possible academic probation or suspension. By providing students with the opportunity to better understand necessary music theory knowledge and skills and thus supporting student learning in Music Theory I, students will be more likely to achieve passing scores in Music Theory I. If students pass Music Theory I during their first semester in college, they will not have to repeat the course, a scenario that could cause students to delay graduation or delay entrance into the teacher education program, or to switch majors in order to avoid these delays. Students with failing grades also may be at risk of being placed on academic probation, losing financial aid, or both.

For the college, improved student achievement in Music Theory I also could be beneficial. In particular, improved student achievement in Music Theory I could result in decreased rates of students on financial aid and academic probation and increased rates of on-time graduation. MDU could use these data about student outcomes in the music department programs for marketing purposes and potentially recruit students who may have otherwise pursued their music degree at another institution.

The outcomes of this study and the resulting study project may have applications in other settings. Although this study was qualitative and the results are not generalizable

to other settings, as discussed previously, they may be transferrable. For example, after reviewing the results of this study and the proposed music theory lab, faculty in and administrators of other programs at MDU may be prompted to explore ways to improve outcomes for academically at-risk students in those programs, which realistically could lead to changes that help all students improve their performance. Likewise, leaders from other schools could be prompted by the results of this study to conduct similar research in their schools and take action to improve student outcomes. In addition, if results of that exploration indicated that students would benefit from content support and extra help in particular, the music theory lab could serve as an exemplar of how to provide that help and support. Likewise, leaders from other schools could be prompted by the results of this study to conduct similar research in their schools and use the music theory lab as an exemplar of how to support student learning.

My one recommendation for practice is that the music theory lab course be fully implemented at MDU. Because I had intentions to implement the course from the beginning of its development, I developed it fully and following the requirements, policies, and procedures mandated by MDU. The project has been well-received by stakeholders at MDU, and I anticipate that the music theory lab course will be available for students in the fall of 2018.

Conclusion

Concern for student retention at the college level is not a new concept nor is it one that has diminished since the early 1970s when the problem first gained attention of educators and academic researchers (Crowe, 2015; Tinto, 2006). One reason that notable improvement in student persistence at the college level has not be achieved is that

students continue to struggle to transition to the college setting (Turner & Thompson, 2014; Whannell & Whannell, 2014) often because they (a) lack effective study skills (Turner & Thompson, 2014), (b) lack previous academic achievement (Pleskac et al., 2011), (c) make poor course enrollment choices (Black, Terry, & Butler, 2015), and (d) lack social support (Thomas, 2014a). In addition, each student's background, experiences, and learning needs are unique (Pascarella, 2006). Although these conditions explain why students may fail courses during their first semester of college and subsequently leave college, they also underscore the importance of conducting research in each unique learning environment to determine the overall needs of students in those particular environments. This study represents such research and is a critical step toward change at MDU.

I do realize that no one program or course can completely eradicate challenges to student success. However, I am confident that the implementation of the music theory lab course at MDU will at least diminish their impact and thus help to improve outcomes for students who enroll in Music Theory I. Specifically, by helping students improve their music theory knowledge and skills, students will be more likely to achieve passing scores in Music Theory I during their first semester at MDU. By helping students improve their performance in Music Theory I, students may avoid (a) delayed graduation, (b) delayed entrance into the teacher education program, (c) possible financial aid probation or suspension, and (d) possible academic probation or suspension. By helping students pass Music Theory I during their first semester at MDU and avoid the potential negative outcomes associated with failure in or withdrawal from the course, I may take a leadership role in initiating positive social change for students in the music program at

MDU and may do so in the early stages of their academic careers when it may be most impactful.

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Appendix A: Music Theory Lab Project

Framework for Implementing the

ONLINE MUSIC THEORY LAB

Offered In Conjunction with Music Theory I at

Xxxxxxxxx State College

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Overview

Between 2011 and 2016, students enrolled in Music Theory I at Xxxxxxxxx State College consistently withdrew from and failed the course. During these years, 21.1% of the 133 students enrolled in the Music Theory I course withdrew from the course, and 21.8% of those students did not pass the course. Combined, these percentages represent more than 42.9% of students originally enrolled in the Music Theory I course at the beginning of each fall semester for those school years. Students who withdrawal from or fail Music Theory I risk delayed entrance to the teacher education program and delayed graduation. They also are at risk for being placed on financial or academic probation. Some students may choose to change majors.

An exploration of challenges to success faced by these fine arts students revealed that many of them lack academic preparedness for the Music Theory I course. Students also described themselves and other students as lacking maturity, lacking understanding of expectations at the college level, and lacking appropriate effort. Most students who shared their perceptions suggested that they would benefit from additional academic support, and many students anticipated that they would benefit from a music theory lab.

To meet students' expressed needs, a music theory lab was developed using best practices for course redesign and adult learning found in the literature and developed to support student learning of concepts presented in Music Theory I. The rationale behind this choice of design was that by providing students' academic support structured to meet their learning needs, students may improve their performance in Music Theory I. The intended outcomes of the music theory lab are better student performance in the Music Theory I course, decreased rates of change in majors for music education majors, fewer delays in student teaching placements for music education majors, and higher graduation rates for all music majors. This report was written to present the content of the lab curriculum and explain the roles and responsibilities of essential faculty and facilitators.

Section 1. Online Music Theory Lab

1.1 Course Description

The goal of the music theory lab is to help students better meet the course objectives for Music Theory I based on fundamental concepts of music theory:

- The student will be able to recognize, analyze, and write in a musical style using correct notation, scales, modes, intervals, and beginning elements of harmony and melody.
- Through ear training, the student will be able to recognize simple intervals, chord structures, and rhythms.

1.2 Course Structure

The music theory lab is a semi-structured computer-based course that includes the use of online activities. This course is void of traditional lectures and is facilitated by teacher assistants who are available to tutor and instruct students as needed on individual bases according to their unique learning needs. The online platform for the music theory course is Blackboard.

Students are not required to complete any assignments. However, they are encouraged to engage with the provided structured learning opportunities to meet their own unique learning needs. Each weekly learning objective is supported by

- a video tutorial component to provide content information,
- an informational reference guide of concepts introduced in the tutorial videos,
- online learning activities, and
- supplemental learning materials in the form of printable exercises.

To challenge more advanced students, a discussion prompt and advanced training opportunities are included in each week's lesson; however, all students are encouraged to participate in the discussion and work with the advanced tutorial opportunities. Those opportunities include access to ear training tutorials, an online music theory website, and music notation software on the school computers. Also, to allow students a forum to communicate openly with other students about any subject-related concerns or interests they may have, a digital student lounge is available through the course portal on Blackboard.

The topics of each week's learning opportunities coincide with what is being taught in Music Theory I that week. Overall, the concepts introduced each week are distinct from the prior weeks, although concepts introduced each week build upon one another and are applicable in subsequent lessons. Once weekly lab resources are made available, they will remain accessible for the remainder of the semester.

1.3 Course Content

Unit 1: Notation

- Week 1: the staff
- Week 2: intervals
- Week 3: rhythm

Unit 2: Scales, Tonality, Key, & Modes

- Week 4: scales
- Week 5: transposition
- Week 6: key signature

Unit 3: Intervals and Transposition

- Week 7: intervals and transposition (continued from previous lessons)
- Week 8: consonance and dissonance
- Week 9: types of intervals

Unit 4: Chords

- Week 10: melody and harmony
- Week 11: triads
- Week 12: inversions

1.4 Grading & Attendance

Because students are not required to complete assignments, students will not receive a grade for the course. However, attendance is mandatory and will count toward students' final participation grade in the Music Theory I course.

1.5 Facilitator Roles & Responsibilities

The successful implementation of the music theory lab requires coordination and cooperation among the Music Theory I instructor, the music education instructor, and the teaching assistants.

Music Theory I Instructor

The Music Theory I instructor is responsible for explaining to students the purpose and structure of the music theory lab during the first Music Theory I class meeting and reviewing the syllabus for the music theory lab course (see Appendix A). The Music Theory I instructor also is responsible for ensuring that the teaching assistants submit records of student attendance in the music theory lab each week.

Music Education Instructor

The music education instructor is responsible for recruiting teaching assistants from music education courses, determining a schedule for them, and offering credit of some sort for their effort. The music education instructor is encouraged to make the music theory lab teaching assistant opportunity a mandatory part of their course work to facilitate student participation. Ideally, each music theory lab session will be facilitated by two or three teaching assistants.

Teaching Assistants

The teaching assistants will be responsible for tutoring and instructing students in the music theory lab upon student request and on an individual basis. This instruction may include helping students understand the information included in the topic-specific content tutorials for each week or how to apply the concepts presented in those tutorials to the online activities and printable exercises. Teaching assistants also will be responsible for recording student attendance and reporting it to the Music Theory I instructor.

1.6 Students Responsibilities

The music theory lab was developed to help students master fundamental concepts of music theory. However, students are responsible for facilitating that mastery by engaging with the learning opportunities provided each week. Students also are responsible for attending the music theory lab each week. In addition, students are expected to adhere to all college policies and procedures related to student conduct and ethical behavior.

Section 2. Course Access through Blackboard

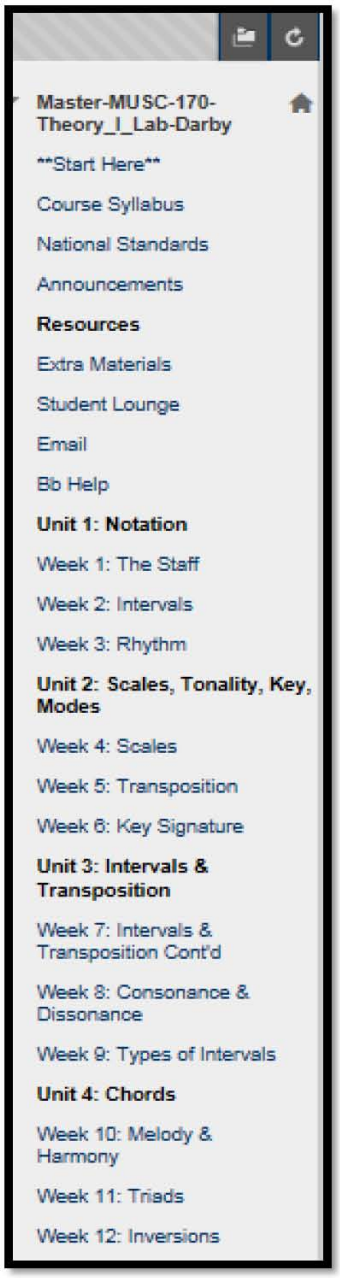


Figure 1. **Blackboard screen shot of navigation pane.**

When students access the music theory lab via Blackboard, they are offered a variety of topic links via the navigation pane (Figure 1). The links are divided conceptually into groups.

2.1 Administrative Links

Start Here*

Students are directed to **Start Here** with a link that leads them to a greeting page (see Figure 2). On this page, students are reminded about the purpose of the music theory lab, its structure, and the alignment of topics with those they are studying in Music Theory I. They also are directed to take note of the other links in the navigation pane.

Course Syllabus

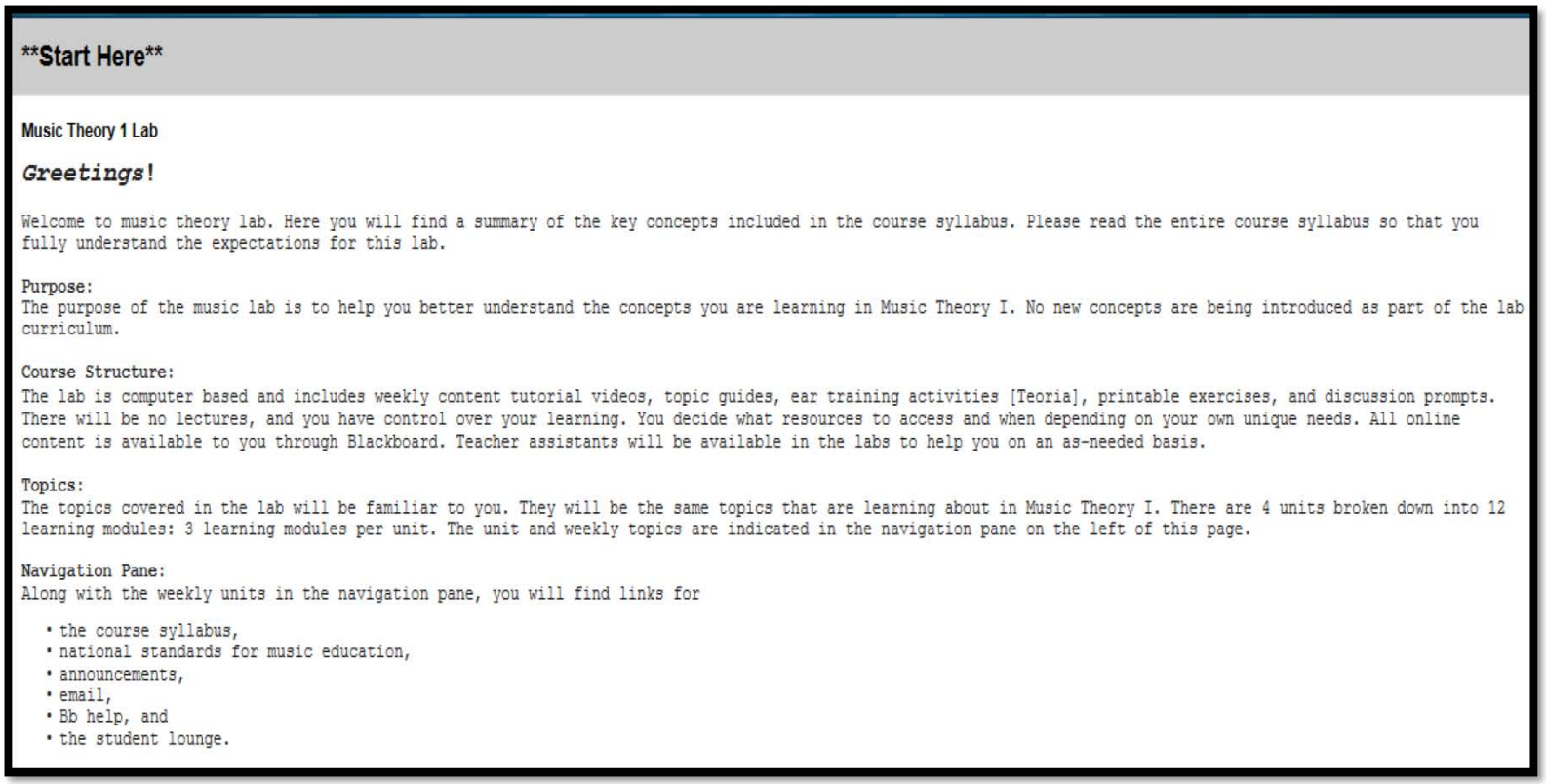
The music theory lab course syllabus is provided on Blackboard so that students may have quick and on-demand access to it for reference purposes (see Figure 3). For the complete syllabus, see Appendix A.

National Standards

The national standards for student learning in music theory are provided to students to help them understand the alignment between the concepts they are learning in Music Theory I, and consequently in the music theory lab, and those national standards (see Figure 4).

Announcements

A link to an announcements page is provided so that the Music Theory I instructor, the music education instructor, and other college administrators may communicate with students as needed (see Figure 5).



Start Here

Music Theory 1 Lab

Greetings!

Welcome to music theory lab. Here you will find a summary of the key concepts included in the course syllabus. Please read the entire course syllabus so that you fully understand the expectations for this lab.

Purpose:
The purpose of the music lab is to help you better understand the concepts you are learning in Music Theory I. No new concepts are being introduced as part of the lab curriculum.

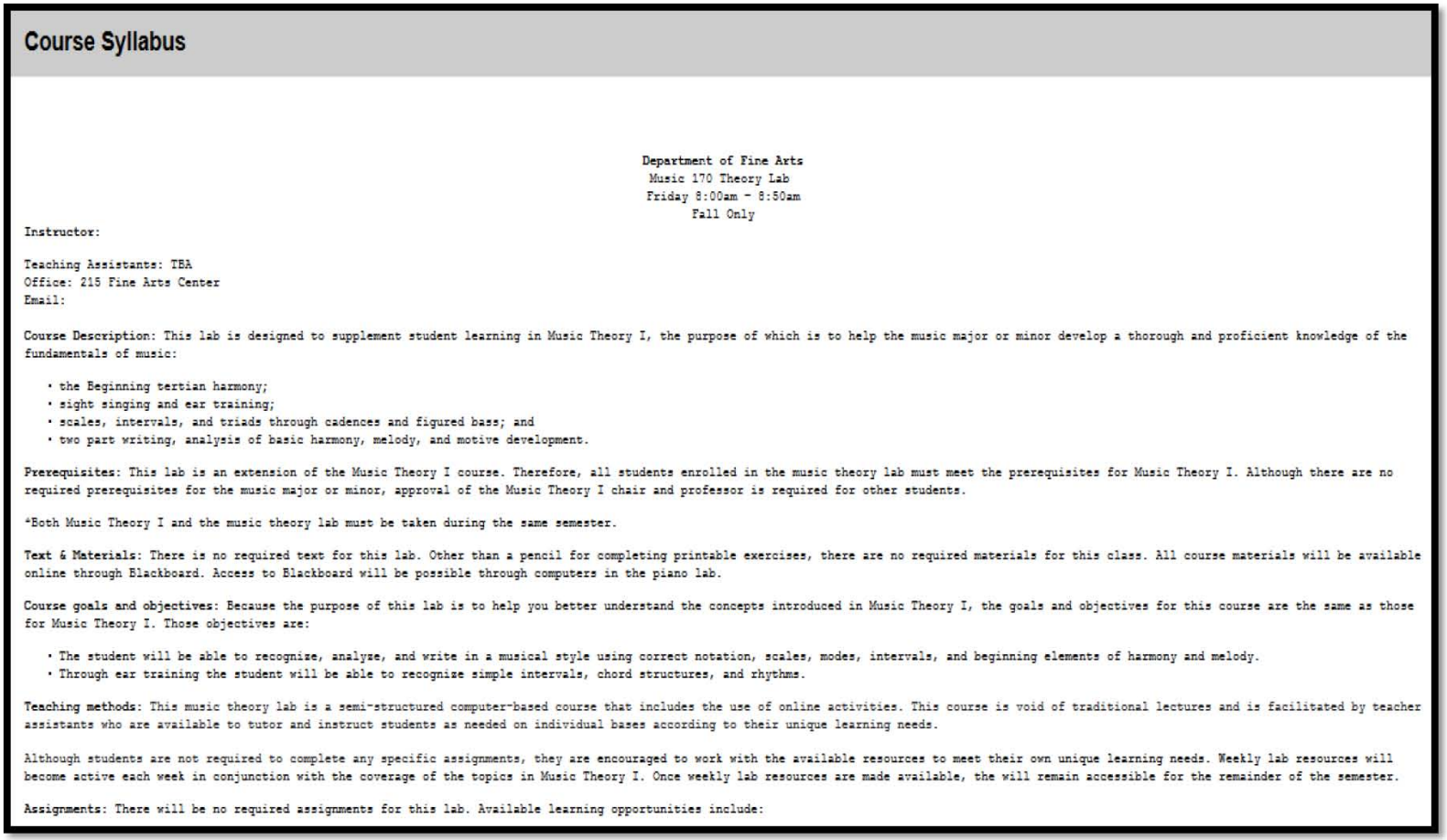
Course Structure:
The lab is computer based and includes weekly content tutorial videos, topic guides, ear training activities [Teoria], printable exercises, and discussion prompts. There will be no lectures, and you have control over your learning. You decide what resources to access and when depending on your own unique needs. All online content is available to you through Blackboard. Teacher assistants will be available in the labs to help you on an as-needed basis.

Topics:
The topics covered in the lab will be familiar to you. They will be the same topics that are learning about in Music Theory I. There are 4 units broken down into 12 learning modules: 3 learning modules per unit. The unit and weekly topics are indicated in the navigation pane on the left of this page.

Navigation Pane:
Along with the weekly units in the navigation pane, you will find links for

- the course syllabus,
- national standards for music education,
- announcements,
- email,
- Bb help, and
- the student lounge.

Figure 2. **Blackboard screen shot of **Start Here** greetings page.**



Course Syllabus

Department of Fine Arts
Music 170 Theory Lab
Friday 8:00am - 8:50am
Fall Only

Instructor:

Teaching Assistants: TBA
Office: 215 Fine Arts Center
Email:

Course Description: This lab is designed to supplement student learning in Music Theory I, the purpose of which is to help the music major or minor develop a thorough and proficient knowledge of the fundamentals of music:

- the Beginning tertian harmony;
- sight singing and ear training;
- scales, intervals, and triads through cadences and figured bass; and
- two part writing, analysis of basic harmony, melody, and motive development.

Prerequisites: This lab is an extension of the Music Theory I course. Therefore, all students enrolled in the music theory lab must meet the prerequisites for Music Theory I. Although there are no required prerequisites for the music major or minor, approval of the Music Theory I chair and professor is required for other students.

*Both Music Theory I and the music theory lab must be taken during the same semester.

Text & Materials: There is no required text for this lab. Other than a pencil for completing printable exercises, there are no required materials for this class. All course materials will be available online through Blackboard. Access to Blackboard will be possible through computers in the piano lab.

Course goals and objectives: Because the purpose of this lab is to help you better understand the concepts introduced in Music Theory I, the goals and objectives for this course are the same as those for Music Theory I. Those objectives are:

- The student will be able to recognize, analyse, and write in a musical style using correct notation, scales, modes, intervals, and beginning elements of harmony and melody.
- Through ear training the student will be able to recognize simple intervals, chord structures, and rhythms.

Teaching methods: This music theory lab is a semi-structured computer-based course that includes the use of online activities. This course is void of traditional lectures and is facilitated by teacher assistants who are available to tutor and instruct students as needed on individual bases according to their unique learning needs.

Although students are not required to complete any specific assignments, they are encouraged to work with the available resources to meet their own unique learning needs. Weekly lab resources will become active each week in conjunction with the coverage of the topics in Music Theory I. Once weekly lab resources are made available, the will remain accessible for the remainder of the semester.

Assignments: There will be no required assignments for this lab. Available learning opportunities include:

Figure 3. **Blackboard screen shot of the Course Syllabus page.**

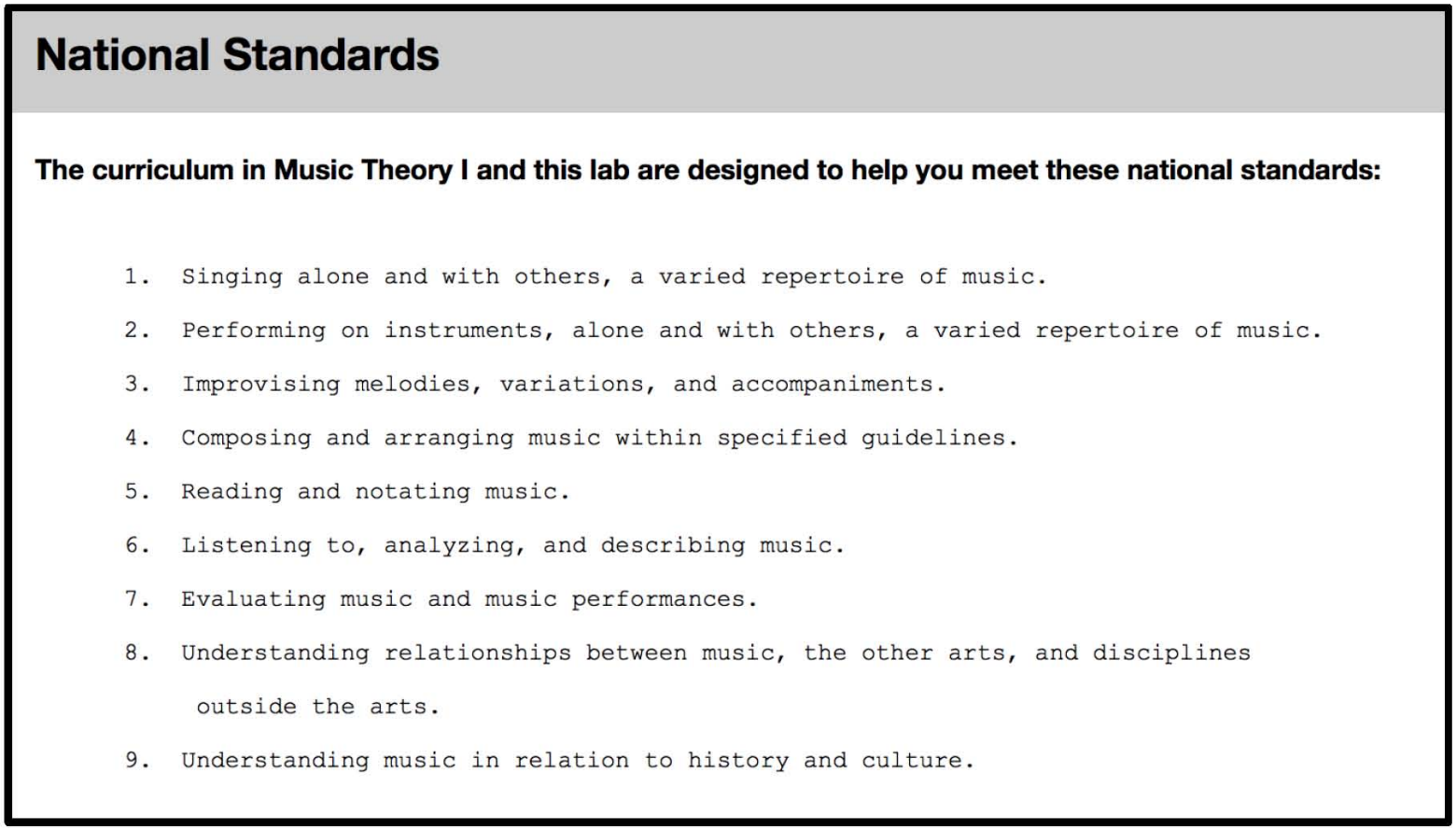


Figure 4. **Blackboard screen shot of the National Standards page.**

Figure 5. **Blackboard screen shot of the Announcements page.**

2.2 Resource Links

Extra Materials

Extra materials are provided to students to use for practice while they are viewing the online tutorials and while they are completing the online activities and advanced tutorial opportunities requiring the generation of new material (see Figure 6). Examples of the lesson plan template, manuscript paper, grand staff manuscript paper, practice record, and tab manuscript are shown in Appendixes B-F. Although these materials are most relevant for music education students, all music majors may benefit from their availability.

Student Lounge

The student lounge is a digital forum in which students can communicate openly with other students about any subject-related concerns or interests they may have (see Figure 7). The student lounge is an ideal place for students to share tips and tricks they have discovered for mastering music theory concepts and for sharing additional music-related resources they have accessed. Students may respond to existing threads or begin new ones as appropriate.

Email

The email function of Blackboard allows students to communicate directly and privately with one another via email (see Figure 8). As is the case with most email programs, students are able to choose one or multiple email recipients.

Bb Help

The help function of Blackboard provides students 24-7 access to trouble shooting support and answers to frequently asked questions (see Figure 9). During day-time hours (8:00 a.m. to 4:00 p.m.), technical help is available through Xxxxxxxxx State College . After-hours technical support is available through an outside service provider.

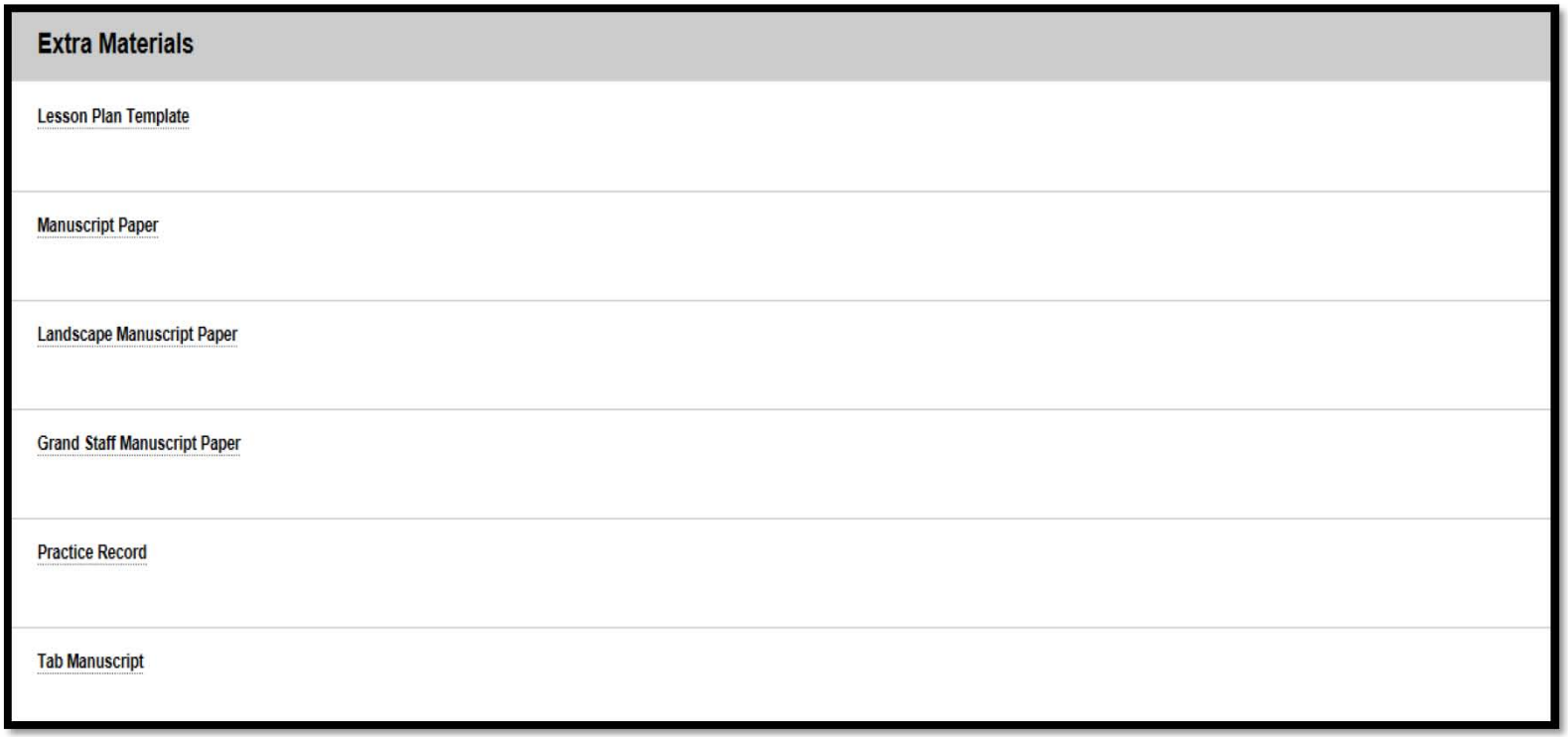


Figure 6. **Blackboard screen shot of the Extra Materials page.**

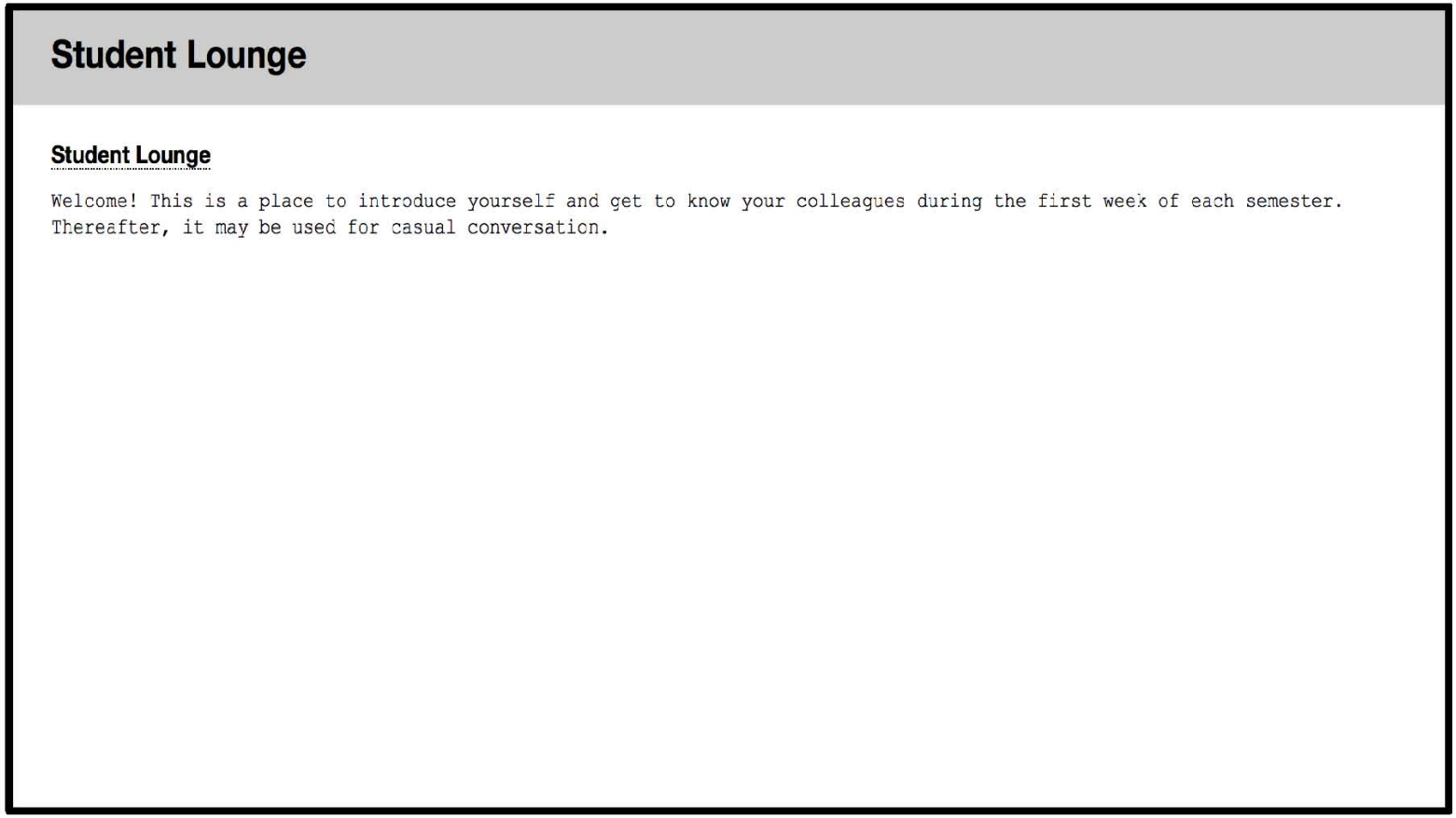


Figure 7. **Blackboard screen shot of the Student Lounge page.**

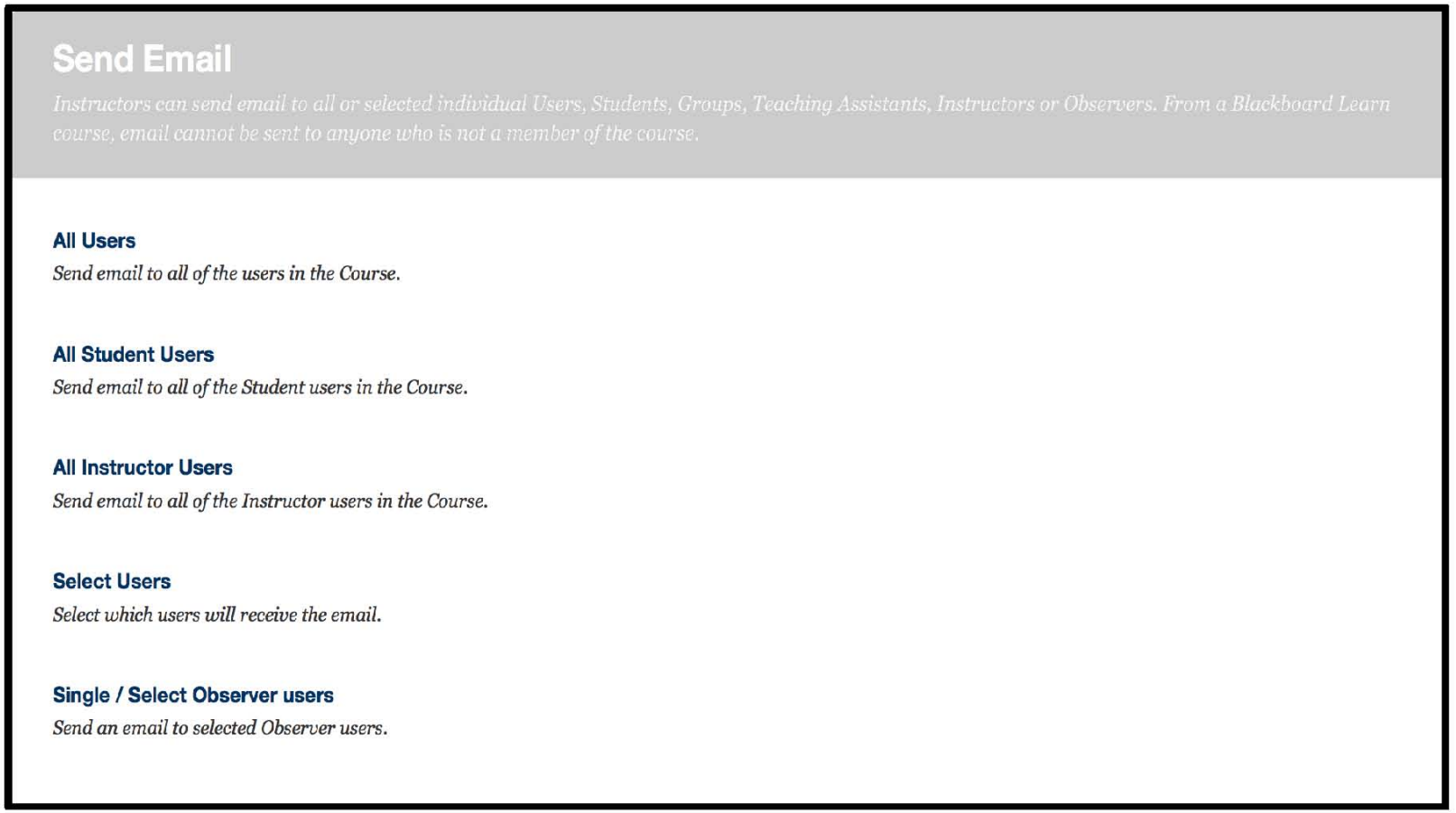


Figure 8. **Blackboard screen shot of the Email page.**

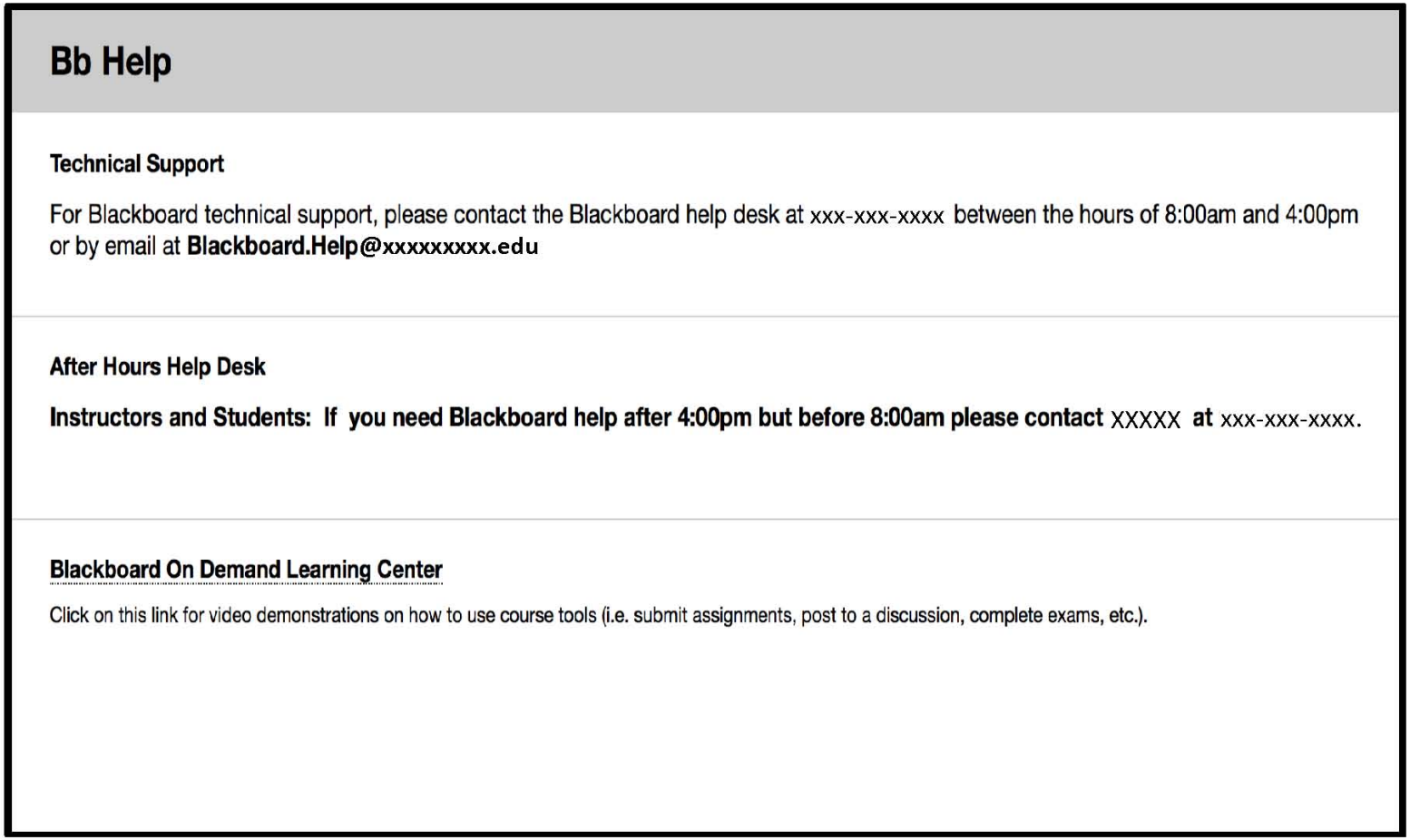


Figure 9. **Blackboard screen shot of the Blackboard Help page.**

2.3 Units 1 - 4 & Weekly Lessons

In the navigation pane, the links for each of the twelve weekly lessons are group appropriately by unit. Each of the weekly links directs students to a landing page for that week's lessons that includes a unique learning objective related to the weekly topic. The landing page for Unit 1 Week 1 is shown in Figure 10. Weekly lesson landing pages also contains links for content tutorials, content reference guides, online learning activities, printable exercises, discussion prompts, and advanced tutorial opportunities.

Content Tutorials

Links for the content tutorials open Content Tutorial landing pages. Links to the video tutorials are provided on the Content Tutorial landing pages. The Content Tutorial landing page for Unit 1 Week 2 is shown in Figure 11.

Content Reference Guides

Links for the concept reference guides are direct links to PDF files. Only one concept reference guide is provided each week. An example of a concept reference guide, the Rhythm Guide for Unit 1 Week 3, is shown in Appendix G.

Online Learning Activities

Links for the online learning activities open Online Learning Activities landing pages. The Online Learning Activities landing page for Unit 2 Week 5 is shown in Figure 12. An example of an online learning activity is shown in Figure 13.

Printable Exercises

Links to the printable exercises open Printable Exercises landing pages. The Printable Exercises landing page for Unit 2 Week 4 is shown in Figure 14. An example of a printable exercise from this same unit and week is shown in Appendix H.

Discussion Prompt

Links to the discussion prompts open Discussion Prompt landing pages with links to prompts. A discussion thread and prompt for Unit 3 Week 7 is shown in Figure 15.

Advanced Tutorial Opportunities

Links to the advanced tutorial opportunities open Advanced Tutorial Opportunities landing pages. The Advanced Tutorial Opportunities landing page for Unit 4 Week 12 is shown in Figure 16. An example of advanced ear training tutorial is shown in Figure 17, and examples of advanced tutorial opportunities from Finale Software and the Teoría website are shown in Figures 18 and 19, respectively.

Figure 10. **Blackboard screen shot of the Unit 1 Week 1 landing page.**

Figure 11. **Blackboard screen shot of the Content Tutorial page for Unit 1 Week 2.**

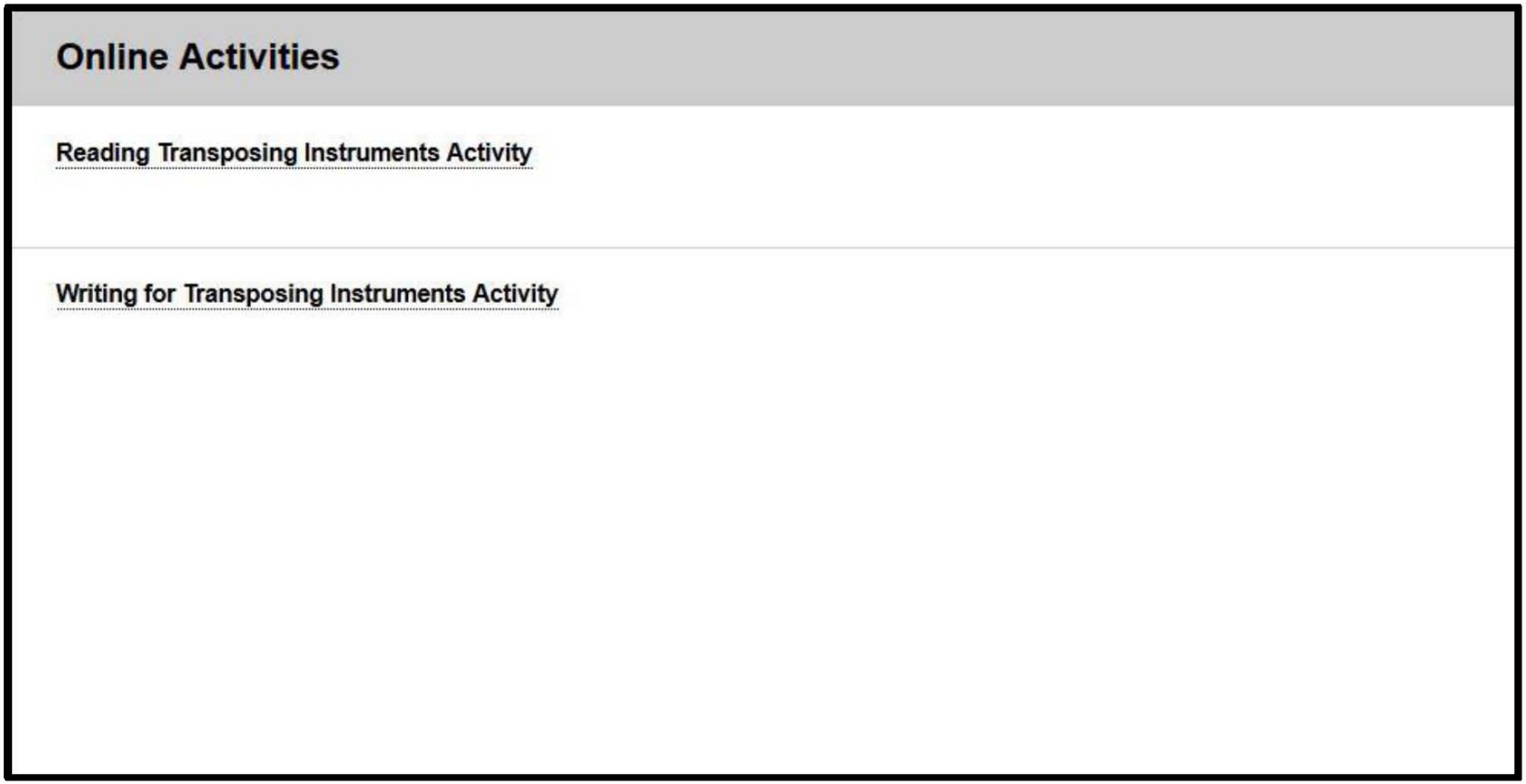


Figure 12. **Blackboard screen shot of the Online Learning Activities landing page for Unit 2 Week 5.**

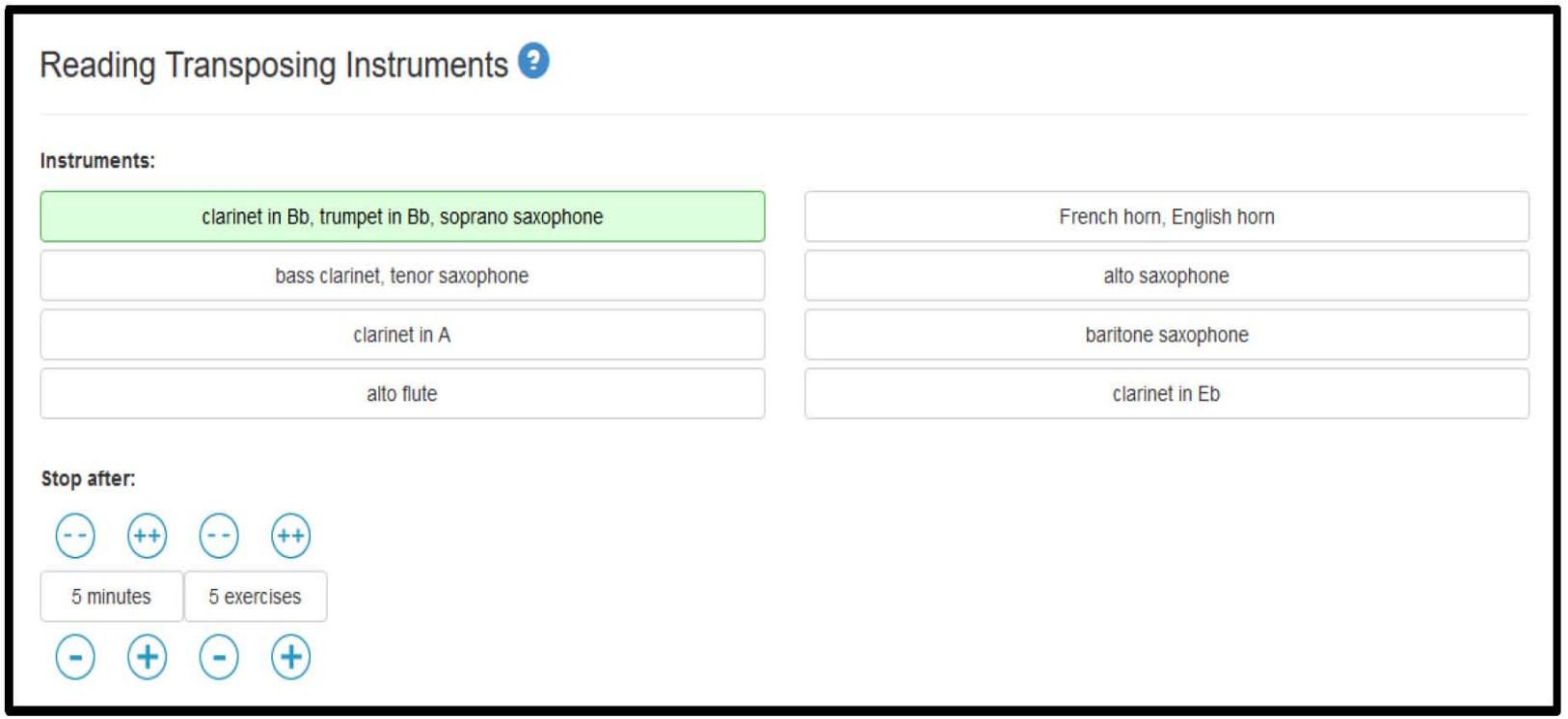


Figure 13. **Teoría screen shot of the online learning activity for Unit 2 Week 5: Reading Transposing Instruments.**

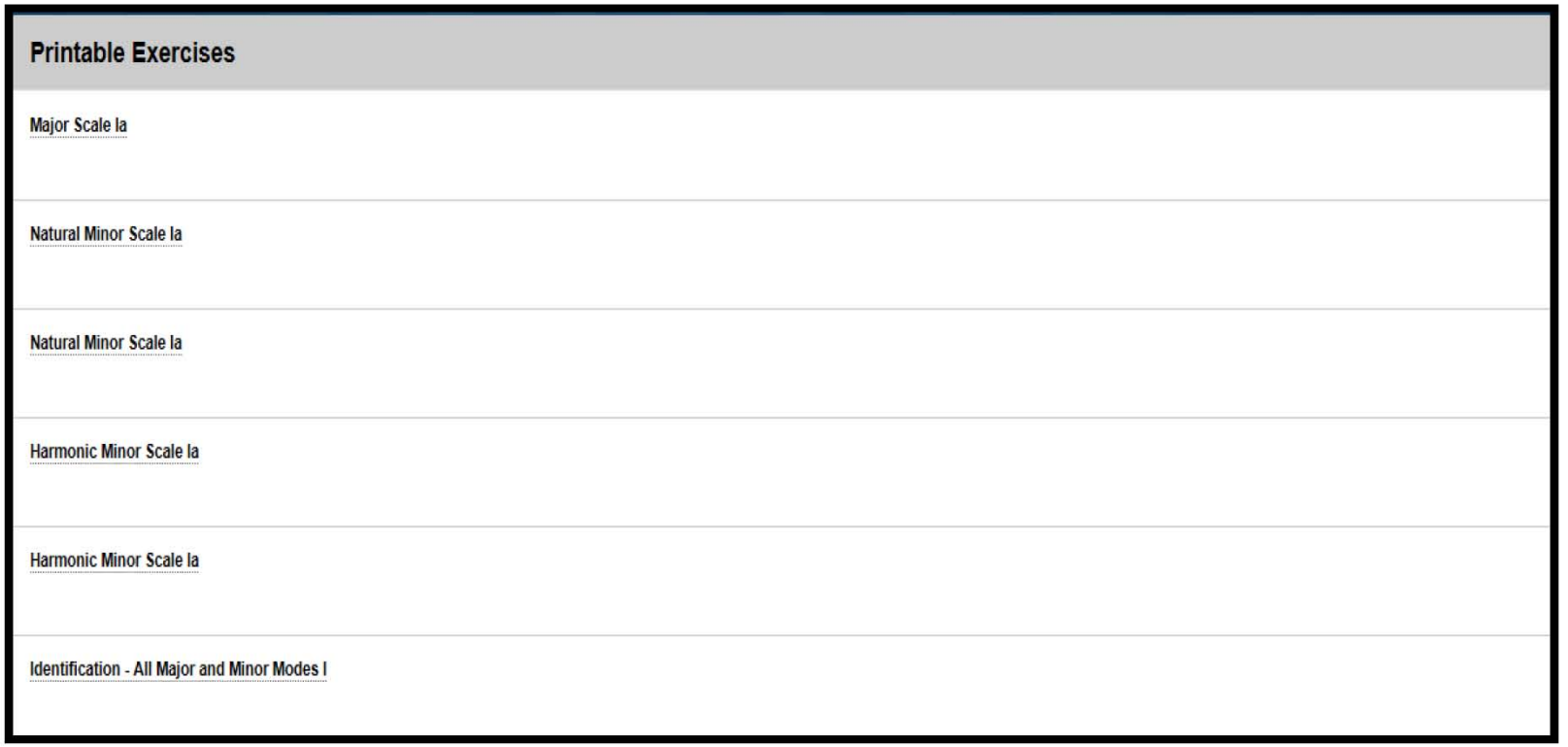


Figure 14. **Blackboard screen shot of the Printable Exercises landing page for Unit 2 Week 4.**

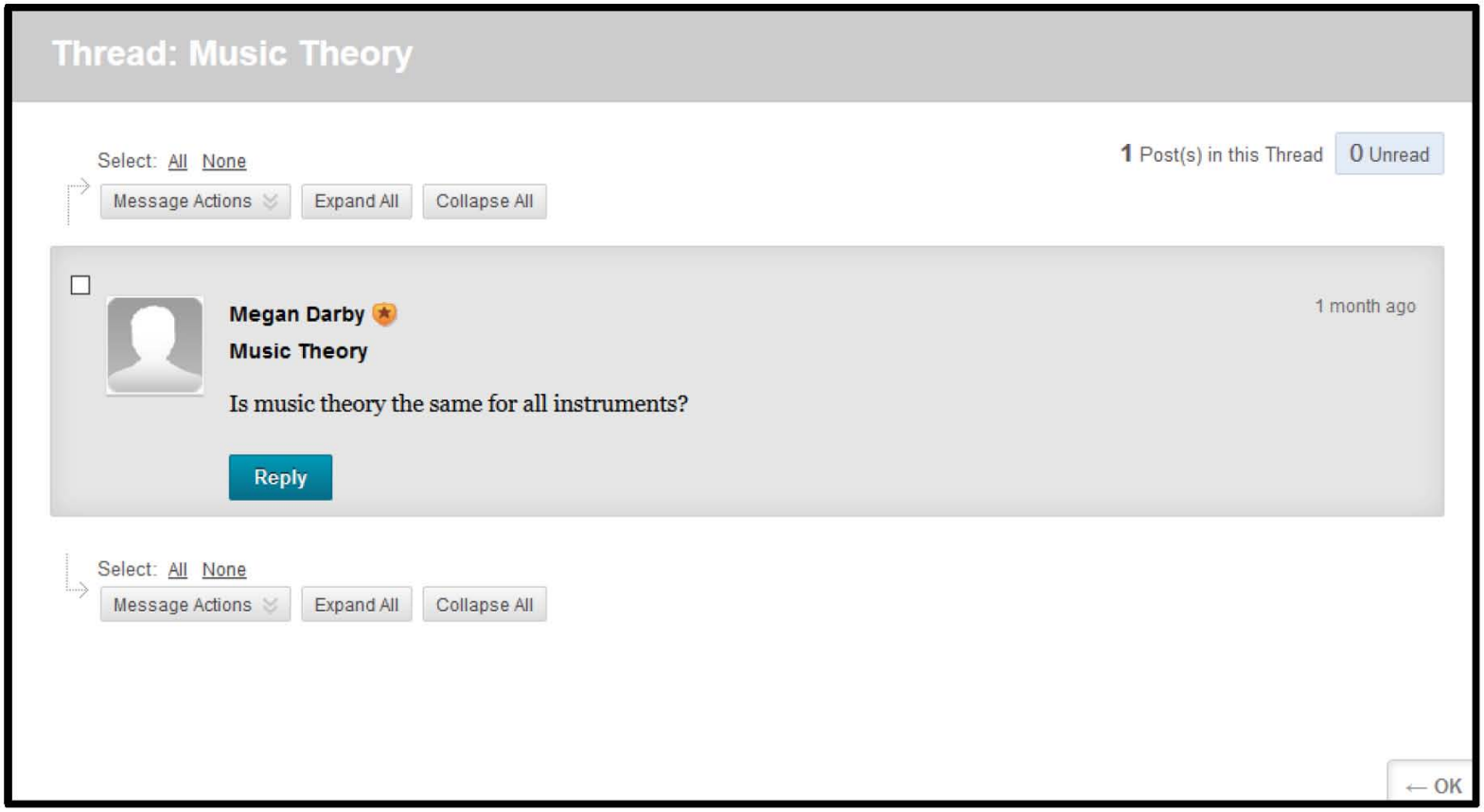


Figure 15. **Blackboard screen shot of a discussion thread and prompt for Unit 3 Week 7.**

Figure 16. **Blackboard screen shot of the Advanced Tutorial Opportunities landing page for Unit 4 Week 12.**

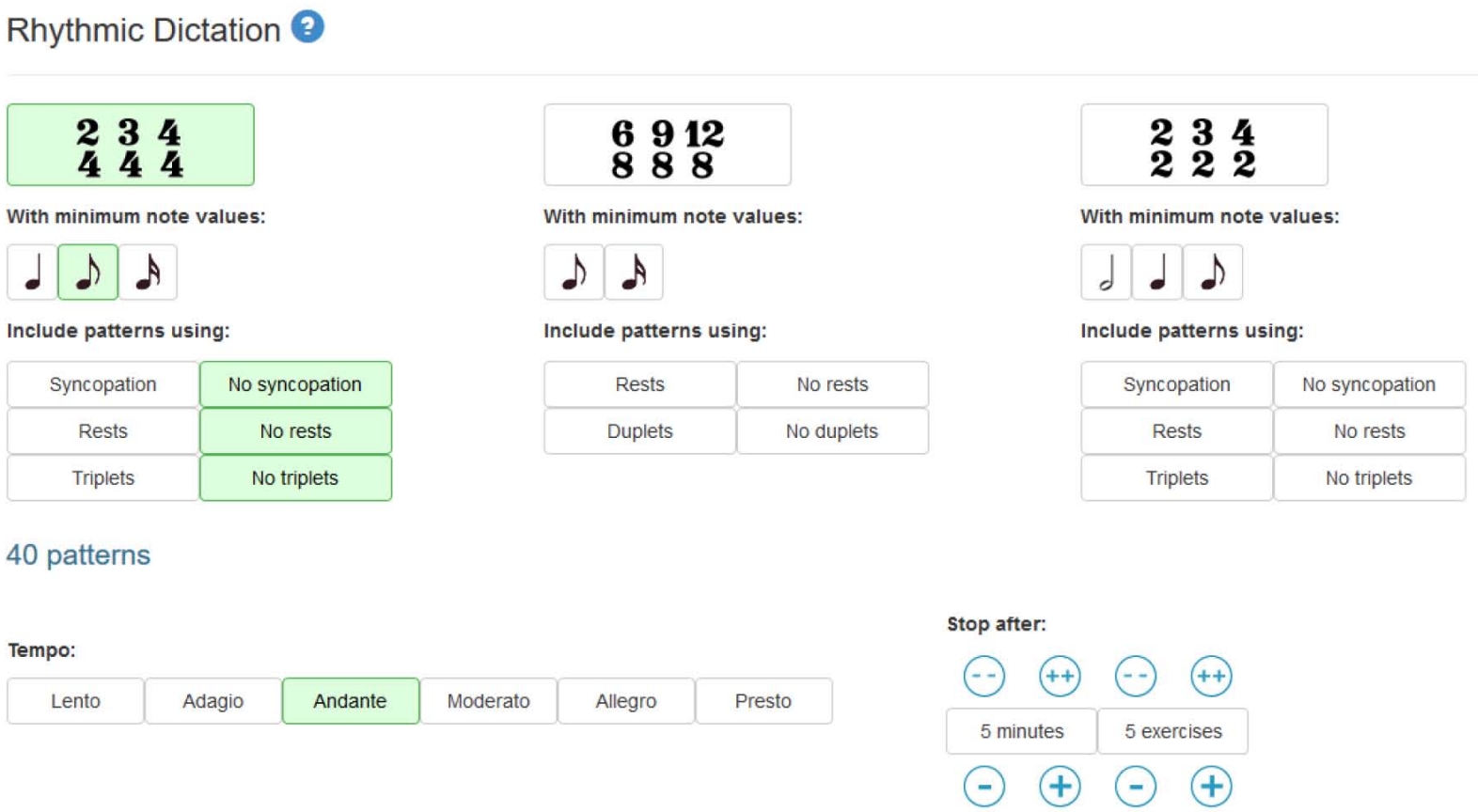


Figure 17. **Teoría screen shot of an advanced ear training tutorial for rhythmic dictation.**

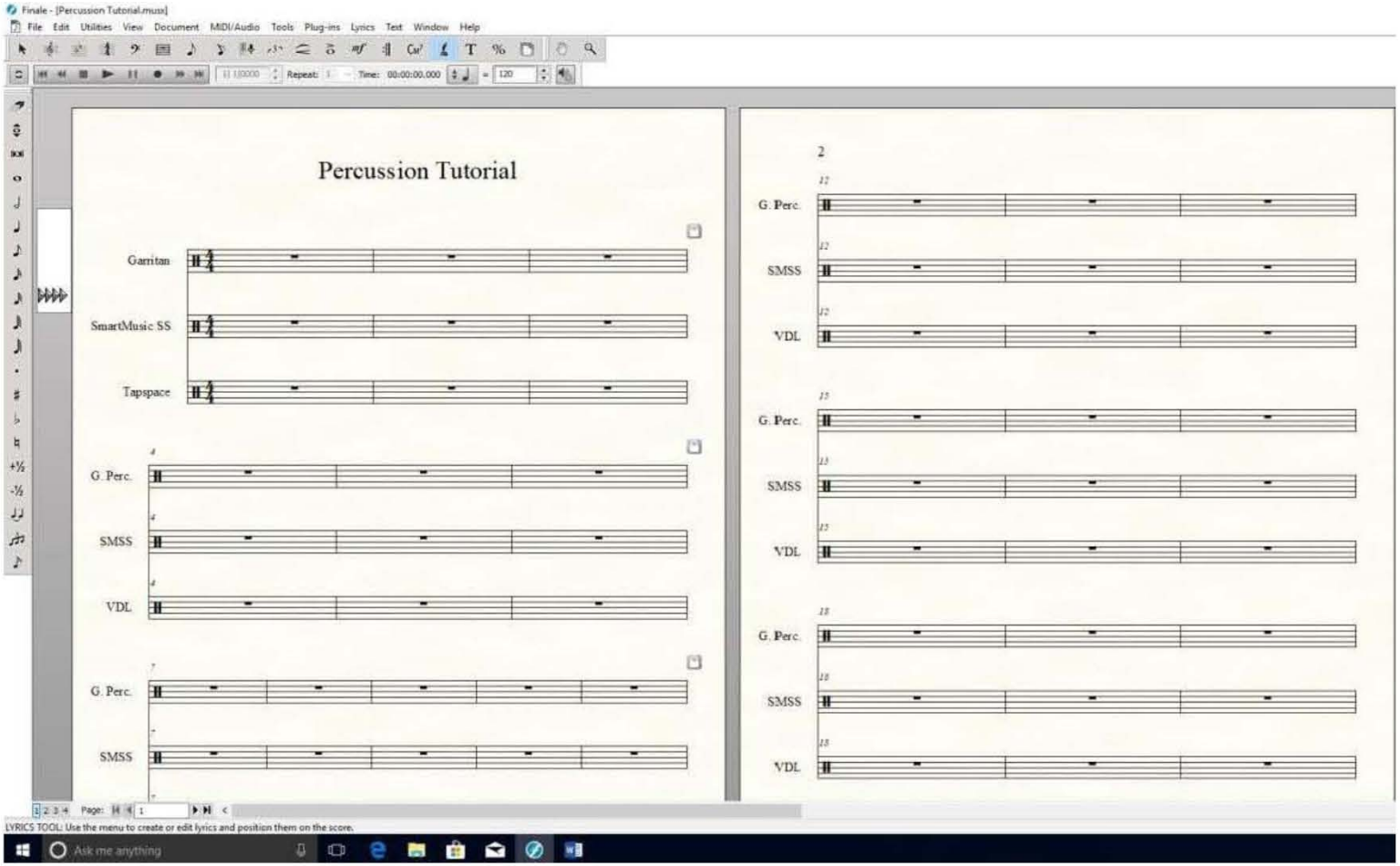


Figure 18. **Finale Software screen shot of an advanced tutorial opportunity for percussion.**

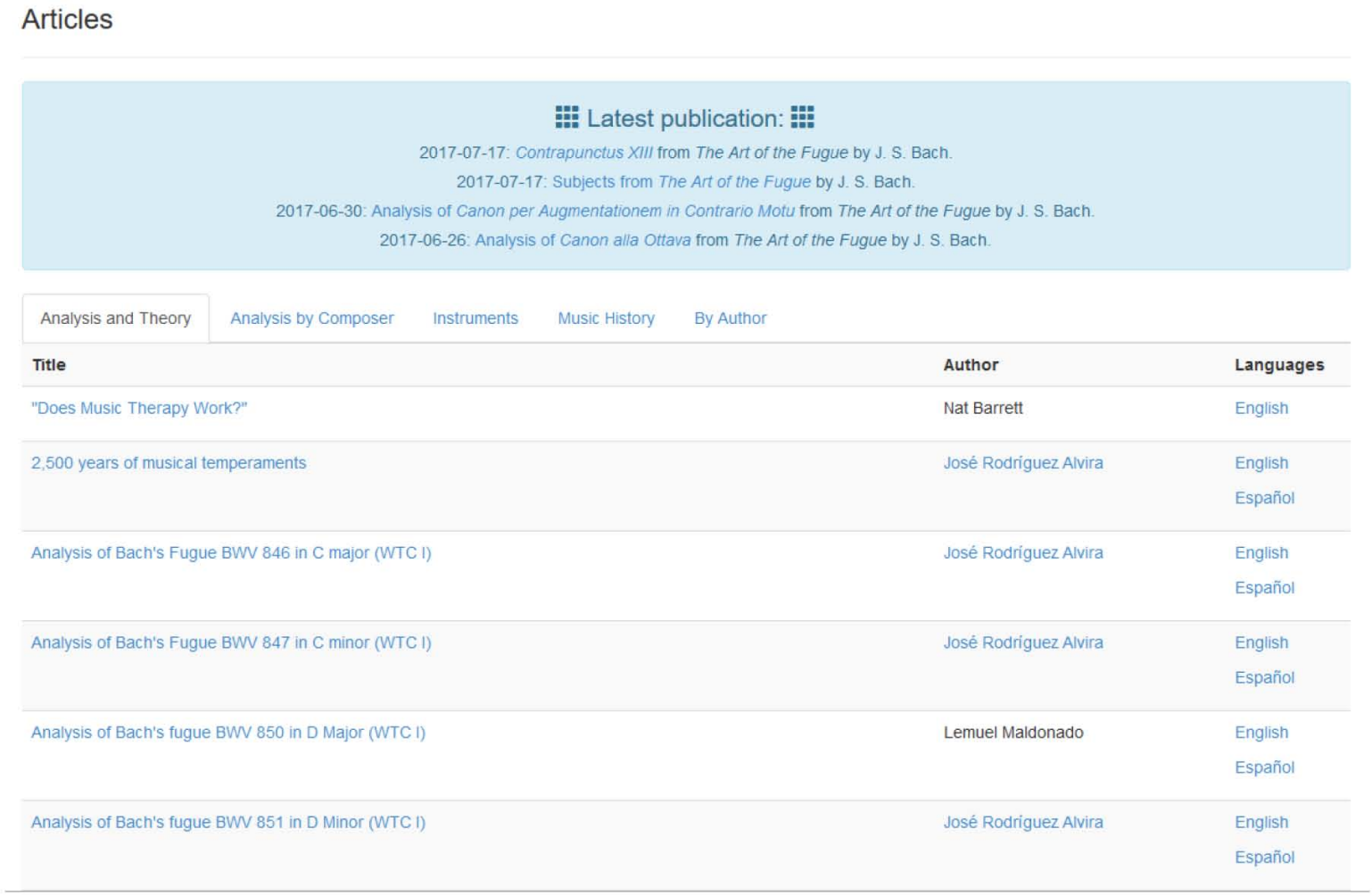


Figure 19. **Teoría screen shot of an advanced tutorial opportunities: Article resources.**

Appendix A: Music Theory Lab Syllabus

Xxxxxxxxx State College
Department of Fine Arts
Music 170 Theory Lab
Friday 8:00am – 8:50am
Fall Only

Instructor: Teaching Assistants (TBA)
Office: 215 Fine Arts Center
Email: TBA

Course Description: This lab is designed to supplement student learning in Music Theory I, the purpose of which is to help the music major or minor develop a thorough and proficient knowledge of the fundamentals of music:

- the beginning tertian harmony;
- sight singing and ear training;
- scales, intervals, and triads through cadences and figured bass; and
- two-part writing, analysis of basic harmony, melody, and motive development.

Prerequisites: This lab is an extension of the Music Theory I course. Therefore, all students enrolled in the music theory lab must meet the prerequisites for Music Theory I. Although there are no required prerequisites for the music major or minor, approval of the Music Theory I chair and professor is required for other students.

*Both Music Theory I and the music theory lab must be taken during the same semester.

Text & Materials: There is no required text for this lab. Other than a pencil for completing printable exercises, there are no required materials for this class. All course materials will be available online through Blackboard. Access to Blackboard will be possible through computers in the piano lab.

Course goals and objectives: Because the purpose of this lab is to help you better understand the concepts introduced in Music Theory I, the goals and objectives for this course are the same as those for Music Theory I. Those objectives are:

- The student will be able to recognize, analyze, and write in a musical style using correct notation, scales, modes, intervals, and beginning elements of harmony and melody.
- Through ear training the student will be able to recognize simple intervals, chord structures, and rhythms.

Teaching methods: This music theory lab is a semi-structured computer-based course that includes the use of online activities. This course is void of traditional lectures and is facilitated by teacher assistants who are available to tutor and instruct students as needed on individual bases according to their unique learning needs.

Although students are not required to complete any specific assignments, they are encouraged to work with the available resources to meet their own unique learning needs. Weekly lab resources will become active each week in conjunction with the coverage of the topics in Music Theory I. Once weekly lab resources are made available, they will remain accessible for the remainder of the semester.

Assignments: There will be no required assignments for this lab. Available learning opportunities include:

- content tutorial videos,
- topic guides,
- online activities,
- printable exercises,
- group discussions, and
- advanced training opportunities.

Examination: There will be no final examination for this lab.

Grading Criteria & Attendance: No grades will be given for the work completed in the lab. However, attendance is critical and will count towards homework participation credit in the Music Theory I course. You are expected to attend all scheduled lab sessions.

Grading scale: N/A

Academic Integrity: Students are expected to adhere to the College's Oath of Academic Excellence listed on page 62 of the GSC catalog. Examples of Academic Dishonesty are listed on pages 63 and 64 of the GSC catalog and represent unacceptable behavior for this course.

ADA Student Statement:

> "It is the policy of Xxxxxxxxx State College to provide reasonable accommodations for qualified individuals with documented disabilities. This College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations with regard to affording equal educational opportunities. **It is the student's responsibility to provide documentation of a disability to Disability Resource Services, located on the main floor of the Xxxxxx Administration Building, Office of External Relations Suite 2. The staff will assist students and faculty in arranging appropriate accommodations.** This is in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990."

Praxis Standards: N/A

Appendix B: Lesson Plan Template

Name_____ Today's Date_____ Next Lesson_____

Music Lesson Assignment

Warm-ups:

Scales:

Method Books:

Solos:

Ensembles:

Teacher Comments:

Practice record

Monday

Tuesday_____

Wednesday_____

Thursday_____

Friday_____

Saturday_____

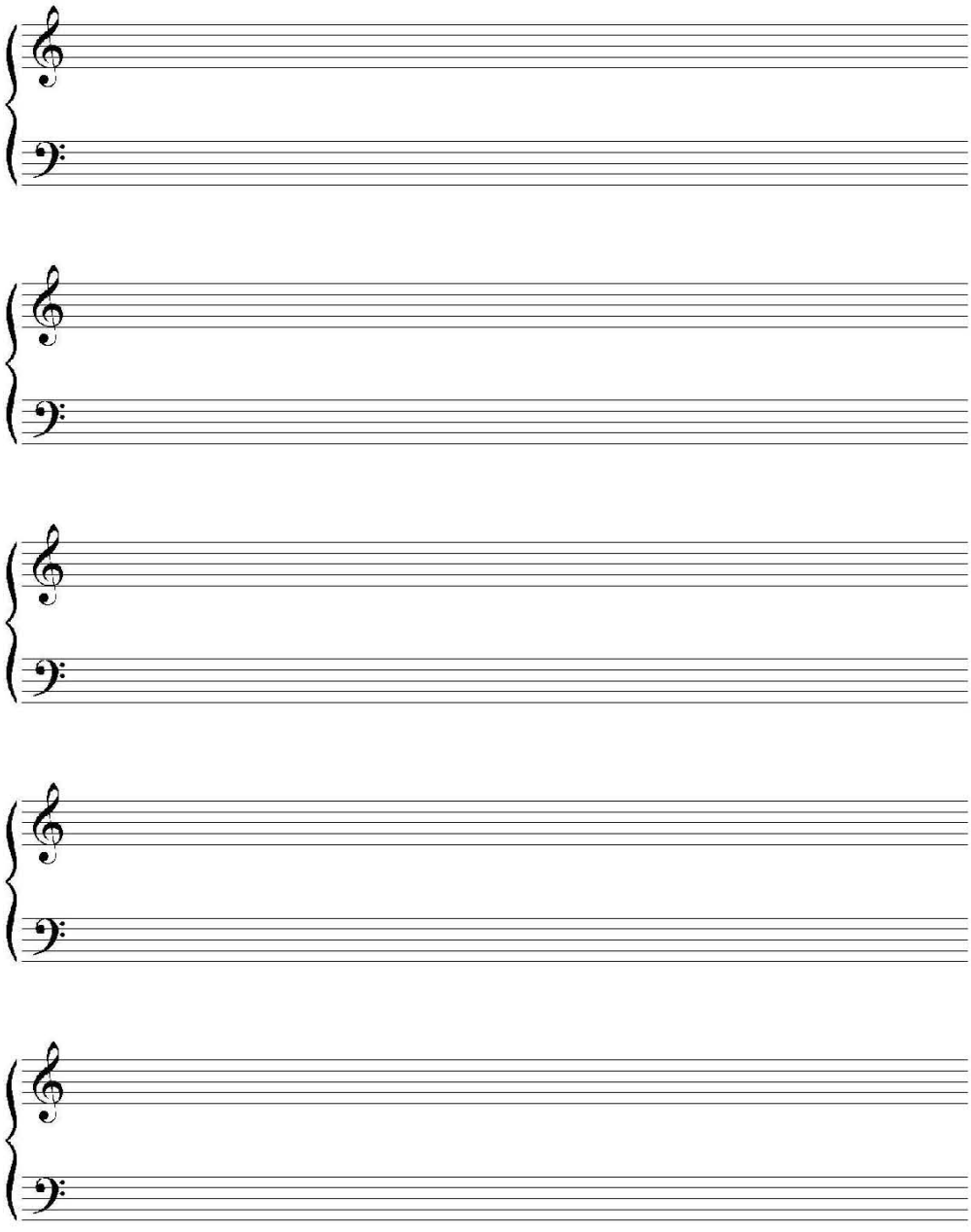
Sunday

Note from Teacher to Parent:

Note from Parent to Teacher:

Appendix C: Manuscript Paper

Appendix D: Grand Staff Manuscript Paper



Appendix E: Practice Record

My Practice Record

Name _____

Today's Date: _____

Next Lesson:

Progress This Week

Assignment

Technique:

Theory:

Repertoire:

My Practice Time

Monday_____

Tuesday_____

Wednesday

Thursday_____

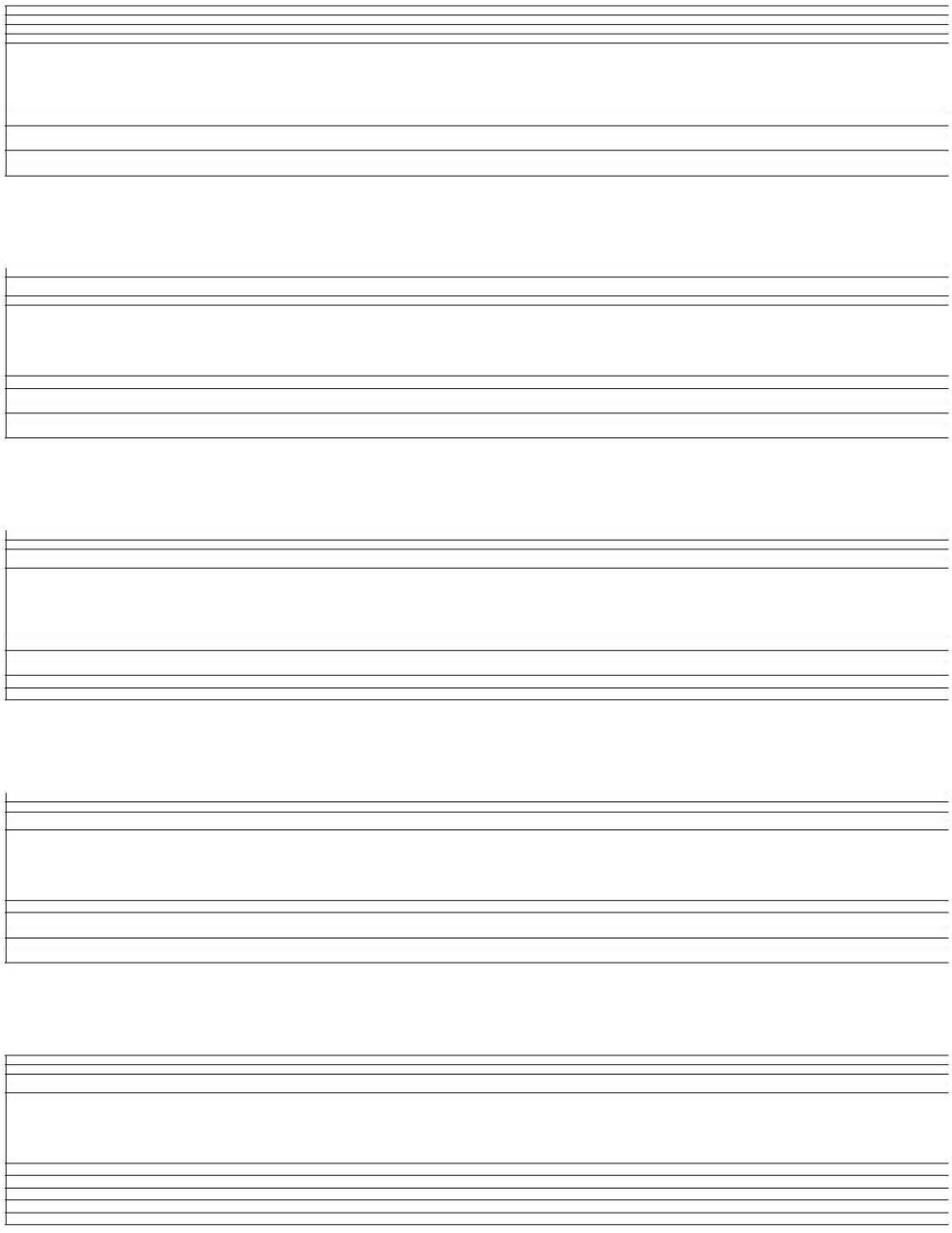
Friday

Saturday_____

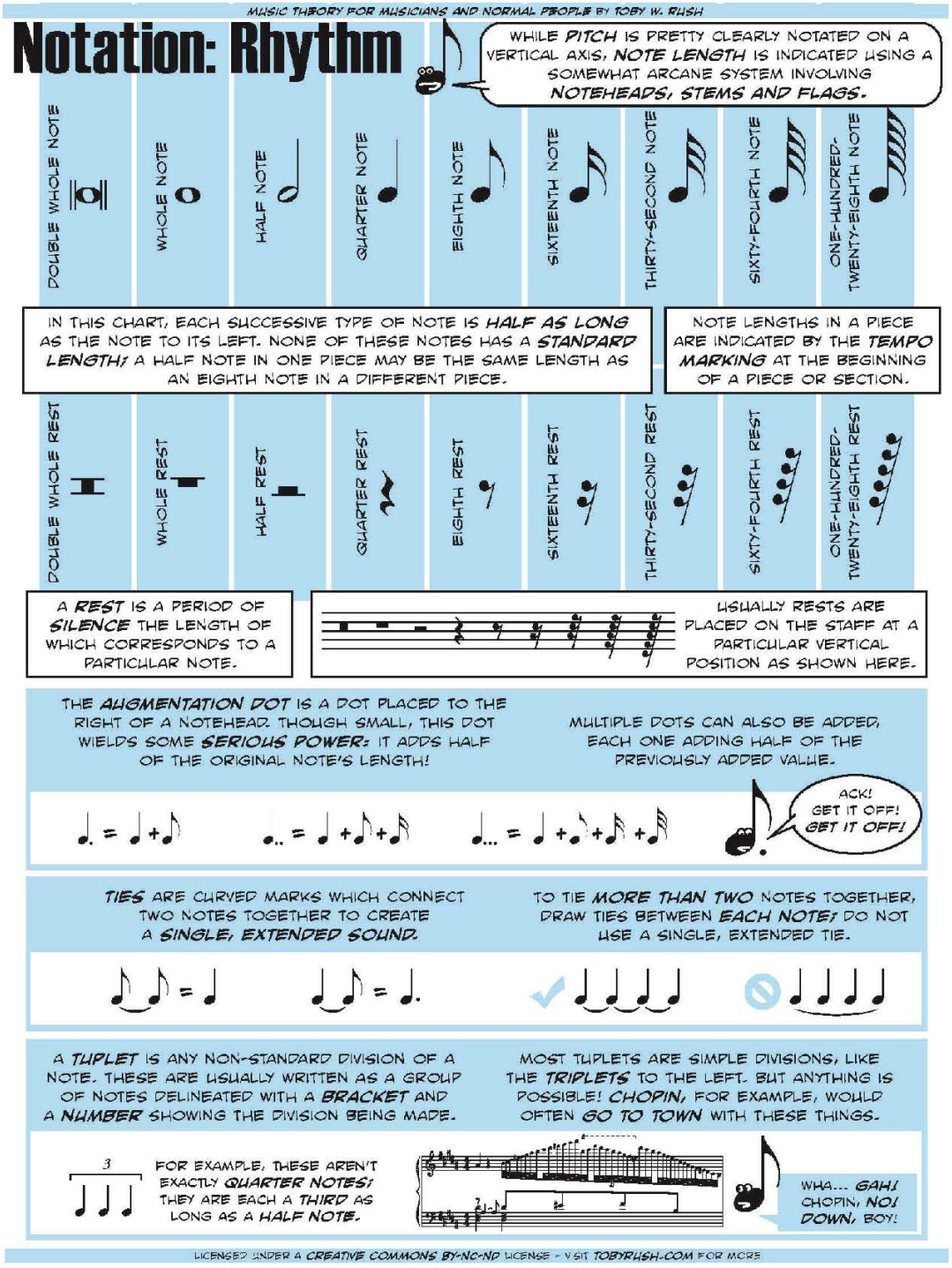
Sunday_____

My Song Space

Appendix F: Tab Manuscript



Appendix G: Content Reference Guide Example (Rhythm)

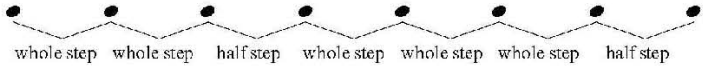


Appendix H: Printable Exercise Example (Major Scale Ia)

Name_____ Date_____

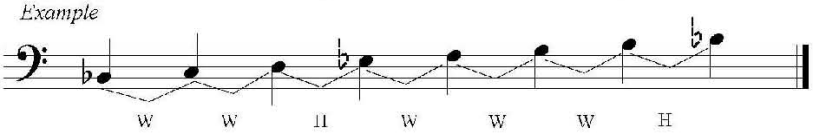
Major Scale Ia - 𝄢

All major scales are made up of the following pattern of whole steps and half steps:

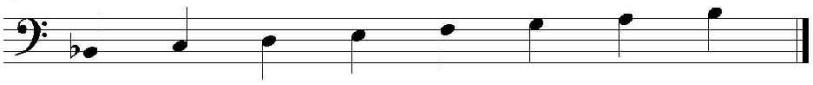


Add sharps or flats to the exercises below to create major scales.
Use the pattern of whole and half steps to determine which accidentals you will need to add.

Example



1



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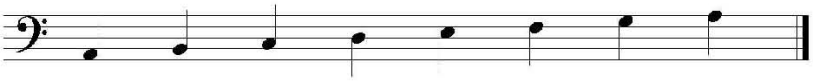
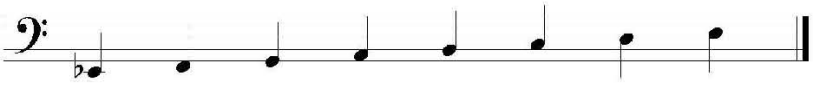


3

4



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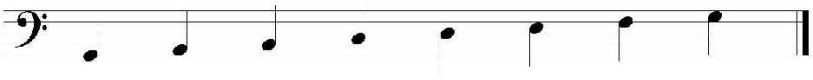

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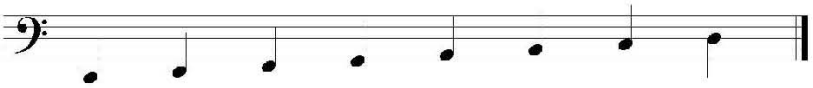

Appendix B: Individual Interview Protocol for Students

Individual Interview Protocol for Students

Interviewer: "Thank you for agreeing to participate in my study about the challenges to student success in Music Theory I at Xxxxxxxxx State College. Previously we discussed the expectations for participation in this study. Do you have any final questions before you feel ready to sign the consent form and begin the interview?"

Participant: "No."

Interviewer: "Great. Then please sign the consent form and we will begin."

Participant: "Yes."

Interviewer: (Answer any questions as needed and repeat question.)

- If participant no longer wishes to participate in the study: "Thank you for your time today. This concludes your participation in this study. You are free to go."
- If all of the participant's questions have been answered and the participant is ready to continue with the interview: "Great. Then please sign the consent form and we will begin."

Interviewer: "First I will begin with 7 background items. Then I will continue with 4 items specific to the challenges to student success in Music Theory I. Please remember that there are no right or wrong responses to the interview items and that your honest responses will be most appreciated. The first item is . . .

Background Items:

1. What is your area of study/concentration?

2. How old were you the first time you were enrolled in Music Theory I?

3. How much time has passed since your last enrollment in Music Theory I?

4. How would you describe your gender?

5. How would you describe your ethnicity?

6. How would you describe your level of financial independence? Would you say you are financially independent (pay for your own living and education expenses), somewhat financially independent (pay for some of your expenses but not others), or financially dependent (do not pay for any expenses).

7. What was the result of your enrollment in Music Theory I? For example, did you pass the course the first time you took it, withdraw the first time you took it and then change programs, withdraw the first time you took it and repeated the class, etc.

Music Theory I items:

8. Please describe your experiences as a first-time student in Music Theory I with regard to challenges to success you may have experienced.
Prompts:

- What was your experience with the difficulty level of the homework?
- What was your experience with the speed at which the instructor covered the material?
- What was your experience with the course expectations?
- What was your experience with your preparation for reading music?
- What was your experience with your knowledge of basic music theory?

9. (Only for student repeating the class.) Please describe your experiences as a repeat student in Music Theory I with regard to challenges to success you may have experienced.
Prompts:

- What was your experience with the difficulty level of the homework?
- What was your experience with the speed at which the instructor covered the material?
- What was your experience with the course expectations?

10. Please describe the factors you perceive helped you overcome the challenges to success you identified.
Prompts:

- What was your experience with getting help from the instructor after class or at any other time?
- What was your experience with getting help from any other instructor?
- What was your experience with getting help from another student in your class?
- What was your experience with getting help from other students not in your class?
- What was your experience with getting private tutoring?
- What was your experience with getting help from online resources?

11. If you had unlimited control and capacity, what solutions to these challenges for students would you implement?

12. Now please tell me what challenges to success you perceived existed for other students who have been enrolled in Music Theory I.
Prompts:

- Did they find the homework too difficult?
- Did they find the course moved to quickly?
- Did they find the course expectations too extensive?
- Did they lack experience reading music?
- Did they lack the knowledge of basic music theory?

13. How did you determine what these challenges were for other students?
Prompts:

- Did you observe challenges to success for other students?
- Did students share their challenges to success with you directly?
- Did you come to these conclusions some other way?

Interviewer: Thank you for participating in this study. After I have completed my initial data analysis, I will contact you to ask for your feedback.

Appendix C: Individual Interview Protocol for Instructors

Individual Interview Protocol for Instructors

Interviewer: "Thank you for agreeing to participate in my study about the challenges to student success in Music Theory I at Xxxxxxxxx State College. Previously we discussed the expectations for participation in this study. Do you have any final questions before you feel ready to sign the consent form and begin the interview?"

Participant: "No."
Interviewer: "Great. Then please sign the consent form and we will begin."
Participant: "Yes."
Interviewer: (Answer any questions as needed and repeat question.)

- If participant no longer wishes to participate in the study: "Thank you for your time today. This concludes your participation in this study. You are free to go."
- If all of the participant's questions have been answered and the participant is ready to continue with the interview: "Great. Then please sign the consent form and we will begin."

Interviewer: There are 3 items specific to challenges to student success in Music Theory I. Please remember that there are no right or wrong responses to the interview items and that your honest responses will be most appreciated. The first item is . . .

Music Theory I items:

1. Please describe what you perceive to be students' challenges to success in Music Theory I.
Prompts:

- Did they find the homework too difficult?
- Did they find the course moved to quickly?
- Did they find the course expectations too extensive?
- Did they lack experience reading music?
- Did they lack the knowledge of basic music theory?

2. How did you determine what these challenges were for students?
Prompts:

- Did you observe challenges to success for other students?
- Did students share their challenges to success with you directly?
- Did you come to these conclusions some other way?

3. Please describe the factors you perceive helped students overcome the challenges to success.
Prompts:

- Did they get help from the instructor after class or at any other time?
- Did they get help from any other instructor?
- Did they get from another student in the class?
- Did they get help from other students not in their class?
- Did they get private tutoring?
- Did they get help from online resources?

4. How did you determine what these challenges were for students?
Prompts:

- Did you observe students overcoming these challenges directly?
- Did students share their methods for overcoming challenges to success with you?
- Did you come to these conclusions some other way?

5. If you had unlimited control and capacity, what solutions to these challenges for students would you implement?

Interviewer: Thank you for participating in this study. After I have completed my initial data analysis, I will contact you to ask for your feedback.

Appendix D: Focus Group Interview Protocol

Focus Group Interview Protocol

Interviewer: "Thank you for agreeing to participate in my study about the challenges to student success in Music Theory I at Xxxxxxxxx State College. Previously we discussed the expectations for participation in this study. Do you have any final questions before you feel ready to sign the consent form and begin the interview?"
Participants: "No."
Interviewer: "Great. Then please sign the consent form and we will begin."
Participants: "Yes."
Interviewer: (Answer any questions as needed and repeat question.)

- If participant no longer wishes to participate in the study: "Thank you for your time today. This concludes your participation in this study. You are free to go."
- If all of the participant's questions have been answered and the participant is ready to continue: "Great. Then please sign the consent form and we will begin."

Interviewer: "First I would like to collect some basic background information from each of you. To maintain your privacy, I will pass out sheets of paper with the background items on it. Please write down your information. Also, on the top of the sheet, please write your participant number, which we will determine right now by counting off in order starting with the person immediately to my right."
Participants: (Participants will count off.) "One. Two. Three. . . .)
Interviewer: "When everyone is finished, I will collect the sheets of paper."
Interviewer: (Interviewer passes out the background information sheets and collect them when participants are finished.) "Now I would like to begin the focus group discussion. Before we do though, I want to remind everyone how the focus group process works and be sure everyone understands and agrees to some basic rules of conduct during the group interview. This interview process is more like a discussion than a typical interview in which I ask specific questions and you answer them. Although I do have interview items prepared, I will use them only to begin the discussion and to help perpetuate discussion as needed. The remainder of the time, you are encouraged to have conversations between one another based on your experiences and perceptions of the challenges to student success in Music Theory I at Xxxxxxxxx State College. You may ask questions of one another and ask for clarification on statement as you see fit. I do ask that you all state your participant number before you begin speaking so that I can tell who is saying what when I listen to the digital recording later. If you forget, I will just speak over you quickly to state your participant number for the recording. Please just continue speaking if this happens. Also, please be respectful of others: do not interrupt them when they are speaking and be polite in your interactions with one another. Finally, please remember that there are no right or wrong responses during this process and that your honest input will be most appreciated. Are there any questions?"
Participants: "No."
Interviewer: "Great. Then we will begin the discussion with first Music Theory I item."
Participants: "Yes."
Interviewer: (Answer any questions as needed and repeat question.)

- If participant no longer wishes to participate in the study: "Thank you for your time today. This concludes your participation in this study. You are free to go."
- If all of the participant's questions have been answered and the participant is ready to continue: "Great. Then we will begin the discussion with first Music Theory I item."

Background Items:

1. What is your area of study/concentration?

2. How old were you the first time you were enrolled in Music Theory I?

3. How much time has passed since your last enrollment in Music Theory I?

4. How would you describe your gender?

5. How would you describe your ethnicity?

6. How would you describe your level of financial independence? Would you say you are financially independent (pay for your own living and education expenses), somewhat financially independent (pay for some of your expenses but not others), or financially dependent (do not pay for any expenses).

7. What was the result of your enrollment in Music Theory I? For example, did you pass the course the first time you took it, withdraw the first time you took it and then change programs, withdraw the first time you took it and repeated the class, etc.

Music Theory I items:

Main Question

1. When you think about the Music Theory I course, what is the first thing that comes to mind?

General prompts to use to urge participants to extrapolate on statements they have made:

- Please tell me more.
- Please give me specific examples.
- Please help me understand what you mean.
- Please help me understand why.

Specific prompts to use if students do not bring up specific topics on their own:

- What was the instruction like?
- How was the class taught?

Follow-up Questions

2. What did you like best about the Music Theory I course?

General prompts to use to urge participants to extrapolate on statements they have made:

- Please tell me more.
- Please give me specific examples.
- Please help me understand what you mean.
- Please help me understand why.

3. What was the worst part about the Music Theory I course?

General prompts to use to urge participants to extrapolate on statements they have made:

- Please tell me more.
- Please give me specific examples.
- Please help me understand what you mean.
- Please help me understand why.

4. If you were giving a new student advice about the Music Theory I course, what would you tell that student?

General prompts to use to urge participants to extrapolate on statements they have made:

- Please tell me more.
- Please give me specific examples.
- Please help me understand what you mean.
- Please help me understand why.

Specific prompts to use if students do not bring up specific topics on their own:

- What might you tell them about the style of instruction?
- What might you tell them about the expectations for the class?

5. If you were the instructor in the class, what changes would you make?

General prompts to use to urge participants to extrapolate on statements they have made:

- Please tell me more.
- Please give me specific examples.
- Please help me understand what you mean.
- Please help me understand why.

Specific prompts to use if students do not bring up specific topics on their own:

- What might you change about the expectations for the class?
- What might you change about the teaching style in the class?
- What might you change about the structure of the class?

Appendix E: Sample Pages From Second Coder

Instructor 2

Music Theory I items:

1. Please describe what you perceive to be students' challenges to success in the Music Theory I course.

Let's see… a lot of it has to do first of all that the fact that… umm… so much of it is dependent on what they learned in high school. Umm… if you are looking specifically at X State College, umm… we have a lot of students that come from these really small, ugh rural, high schools where they might have pretty good band programs but bigger schools offer elementary music theory courses. So, you know. You take a course in high school and then you can come into college with some kind of background knowledge in music theory. And ours really don't. Umm, ours come in very very basic. We kind of how to start right at the very beginning. Umm. . some of it is also, you know… I don't want to talk bad about band directors but the truth is, a lot of them are very competition oriented… and their big thing is to go out and win marching band trophies. And the way to do that is to go out and play the same music and hammer the same music into the kids for like four months and they may get very good at competition, but also that takes up very valuable teaching time. So the students might be able to put on a great marching show but they're basically learning all of their music from rote. Just playing the music over and over and over again. Umm, we also have students who like… in particular, the vocal majors and percussion majors a lot.. and bluegrass majors… who it's very easy for these students to make it through high school and never really ever learn to read music. And so we have kind of a unique thing in that we have a bluegrass program and they take music theory but they kind of, everything they do is so much by ear… and learning it from you know their grandfather and just basically jamming on the grand stand… and they've never had a need to learn music. So vocalist, percussionist and bluegrass people… now band people, it's pretty hard to go all the way through high school and not be able to read music. Vocalists, percussionists, percussionists, and bluegrassers are the ones that can go through high school and then they get to music theory and everything is new to them.

HIGH SCHOOL TRANSITION

CURRICULUM CONFLICT

How do you determine what these challenges are for students?

We give them a… ugh… a theory…. I guess it's like a theory aptitude test…on the second day of theory 1. And… umm… on the first day of music theory besides going over the syllabus and everything that you normally would on the first day… and this is something that X X came up with that I just inherited from him when I took over the class… is, we give them an information sheet. And, among other things that are on that sheet it tells us what their major is, um, their major instrument and voice.. .and who their advisor is… and so we know right off the bat if they are bluegrass, vocal, percussion, and if they are a music education major we know if they are a vocalist, horn player, and then… so on the second day we give them like a theory aptitude test that basically covers everything that you would learn in theory 1 by the end of the semester. So in a perfect world one would be able to take the same test at the end of the semester and be able to do very well on it. Umm…but we give that to them on the second day before they have had

any instruction. They don't get a grade or anything but it kind of lets us know where they fall. Then I grade the tests and then I send an email out to all of the faculty. I don't use the student's names but what I do is send out what the scores were, from highest to lowest. And typically our average score is a "D" or below. We very rarely ever have anyone come in and ace that test. Umm… and then umm. we put at the bottom how many of each major took this test. You know so, we had 3 bluegrass majors, we had 4 performance majors… or we had, actually I think I break them down by instrument. So like bluegrass kind of gets grouped together and brass gets grouped together- vocalists and then percussion. So we kind of use that as a gauge for where they stand and that sort of allows us to know f anybody scores higher on that test- who they are… or if they score low- sometimes we'll get some folks in there who may score like a 5 or 10 on that test and we know where they're coming from, what their instrument is and what their major is.

Please describe the factors you perceive helped students overcome the challenges to success.
How I can tell that they are struggling in the class?

Yeah, anything that you can see that has helped the students overcome their challenges?
Oh, yeah, OK. Umm. You know, I tell them obviously right off the bat that you can always come to me or any of the music faculty because the vast majority of our faculty has been through a music theory class. Umm… they, they, very rarely do though. You do get the occasional person though. Like a very good example was X X, a very studious person and she would come to me and be in my office, but umm… a lot of times the best thing that I have discovered that helps them out that has a pretty high success rate. One is that they get grouped up with somebody that is maybe an upperclassman or somebody that is already in theory three. Somebody that already took theory last year, someone that is pretty good at theory. And, they get together and they, it. its… it's kind of like a mentoring thing in a way unofficially. Sometimes they come to me and sometimes I offer the information voluntarily in class but I'll let the class know as a whole and these people were in here with me last year… and I'll rattle off about a half dozen names and tell them that those folks did very very well, so if you're struggling and you can't get a hold of me, go see these students and they will help you out.

SUPP. HELP NEEDED-

So that works a lot. Another part is that we encourage students to work together on their homework. You know there is a table downstairs, right outside of your office and sometimes they do and sometimes they don't, but we encourage them to work together and the bottom line is… I've been teaching long enough so I know... sometimes I realize that the way I teach it may not be easily explained to somebody else. So maybe it will help if they hear it from another student. They may be able to explain it in a different way than I can. But umm, usually it is before exam times. A lot of times the students will get together and do a group study session in the theory room and a lot of times students who are struggling with theory will show up to those. And those have proven to be pretty helpful.

You did a lot that time when we had an intro to music theory for the bluegrass people. Because we are in a unique position if you go to school for bluegrass music. You know this because we have talked about it a bunch. If you have never read music and you are going into a college class like that, you can't not be handicapped because you've never read before. And everyone else seems to have taken classes in high school to prepare for it. But, you don't really have those opportunities when you play our type of music. But even if they did in high school they aren't going to show you music theory for bluegrass, they're going to show you "Little Cabin Home on the Hill" just real slow… (laughter)

Well I don't have any more question unless you have something else that you feel would be relevant to share.
Well I mean, it just keeps going back to people in my situation… and bluegrass in general I think would benefit from a music theory remedial class or something because that's like the only think I can think of that could possibly help. You could go back to the high schools and the schools could teach music theory to everyone but that's not going to happen. That's the only thing that I could think of that would help me at all.

Because I was defiantly interested in it. I never had a way to apply it. He could have taught me all of that stuff but I couldn't take what I learned and apply it to a mandolin or banjo or something. It's just one of them things where, it's a music program with an emphasis on bluegrass. Like where other places it's just a bluegrass music program, do you know what I mean?

Yes.
Interviewer: Thank you for participating in this study. After I have completed my initial data analysis, I will contact you to ask for your feedback.

Appendix F: Sample Pages of Coded Data Organized by Category

Level of Preparation for College: Maturity

Students Perceived About Themselves

- … I didn't really get a working alarm clock until I got this phone. And this phone is what I use as an alarm clock now. And, uhh… it… my alarm clock just wouldn't wake me up. It wasn't loud enough. (S8) (appears to have gotten a little more responsible because he did find a solution to the problem)
- The math class last semester. Well, here's that entire thing in a nutshell. 8am, Mon-Fri Math 106 with Mrs. X. It's still an 8:00 class, yes. I went up there still needing to pass the class but here is the deal. I got sick for an entire week and I worked it out with Dr. X and Mrs. X just to get my absences on track. She promised me that if I didn't miss anymore class then I would be fine and I would pass the class because I was doing my homework and doing everything you know and I was doing fine. I passed the class even when I came in dreadfully sick. (S8) (same problem with absences in a second class, which was a math class, and then again in Music Theory I the second time helped him learn how to be on time and come to class when he had an 8 am class for Music Theory I the third time around)
- Usually it is a maturity thing. When I came here I was 18. I am 21 now. (S8)
- (S8)
- When I was in high school I never studied for tests or anything like that. I think I learned… I might have gotten one B, but that was about it. (S9)
- For me it was a whole maturity thing sometimes. I mean, look at some of the people now. You've got like X and some of the other ensemble students. They show up to rehearsal on time and they are doing just fine with their classes, but in the beginning some of them weren't even doing that well. (S8)
- Which is, probably what helped me out was me realizing. Like the first time, we would start out with me realizing that my homework grade might be a little bit lower. But I learned that alright, this is what I did wrong and this is what I need to fix. And focus specifically on what I did wrong, and then once I was able to focus on what I did wrong I was able to work on it and get A's. (S9)
- Back then, freshman me I complained about it [missing points on a test] thinking it wasn't fair. No, I should not have asked for it to slide. You have to be a little more mature in order to pass it. If you go in there with a mindset of a high school student, you are going to fail it. (S10) (speaks to maturity)
- The second semester I took those notes and improved on them by making them better and more thorough. (S10) (learned from mistakes- matured, better study habits)
- Because waking up that early, yeah high school does that, you get up that early to go but you have mommy to wake you up. Not here, you have to wake yourself up. (S10)
- You know, I learned that we all had to work together in order to pass this class. (S10) (Student referring to story about waking up another student) I remember one day in class (laughing) I remember the professor saying "someone grab your phone and call

him". So we're all standing by the phone screaming "where are you". He came to class and said you guys scared the crap out of me and we all said that "well you're here aren't you". (S10)
- all of the resources are there, or at least they were for me… I honestly felt like I took advantage of everything (S17)
- I was there at 8am every day. I don't like being absent or late, but that's just me. (S17)
- And I think not being there, or showing up a half hour late is going to take away from the time that you are actually learning. It is a really early class so that kind of is a factor but other than just being present and attentive and willing to learn. (S17)
- But it's like, coming to college you don't really have someone to direct you on what to do and when (S1).
- I was just extremely unmotivated and a piece of crap my first semester. I had no drive or ambition. I didn't want to do anything. I'll just be honest. If I could go back in time I would kick my ass. (S7)
- Yeah, like when people talked about going to an upperclassman tutor thing- I didn't know anyone or want to talk to people about it when I didn't know them. I didn't have anyone. (S1)

Students Perceived About Other Students

- The girl who would like to partake in extracurricular activities was normally hungover. One time she was actually still intoxicated from the night before. (S9) (referring to the class being too early)
- Possibly a lack of maturity as well? (S9)
- They just weren't taking it serious. (S18)
- Like… there was a couple of students who were like "ha, I didn't do my homework again, hahaha" and I'm like… that's not funny you should be doing your homework. (S18)
- majority of freshman think and act like. "I'm going to college, I'm on my own… I can party all the time". They don't care about class. (S4)
- For me it was a whole maturity thing sometimes. I mean, look at some of the people now. You've got like X and some of the other ensemble students. They show up to rehearsal on time and they are doing just fine with their classes, but in the beginning some of them weren't even doing that well.

Instructors perceived About Students

- When they went to high school they had to be on a bus at 6:30 in the morning. And they have to wake up at 7:30 and go to a classroom? Yeah, I know… they get into its a lot more distractions here and you don't have anybody directly supervising you. (I1) (Implication is that he can't understand why they could get up early for high school and not for college. Likely because people, i.e. parents and the school, were monitoring their attendance in class more closely than in college.)

Effort

Students Perceived About Themselves

- But this was actually the first class that I ever studied for. (S9)
- I would look at that and compare it to the book and if I couldn't figure it out I would go and ask him questions. (S9)
- That was another thing, note taking. The first semester I didn't note take at all. (S10)
- Uhh… studying… using flashcards, getting together with people… and working on homework together and stuff like that. (S14)
- Well I had to do a lot of extra studying is what I had to do (laughter). A good amount. (S16)
- why I had to take it upon myself to get caught up to speed. (S17)
- Yeah, like every word he said I took notes! (S3)

Students Perceived About Other Students

- I think because he just didn't put forth the effort. Because they give you a study guide telling you "OK all of this will be on the test". So you go through the study guide and go through the book highlighting, marking, writing notes in the margin if you need to… but I don't think he prepared at all. (S13)
- There were people who were just, couldn't pick it up because they were confused by the material, or there was people who had like no dedication. (S15)
- majority of the people that I hung out with that didn't pass- didn't study. They didn't put in the extra time, they were drinking and partying instead of trying to do their homework. . . . the majority was because they were doing stupid stuff instead of work. (S18)
- ., but the people who generally straight out aren't coming to class or doing their work. [don't do well] (S7)
- because if you want to learn something you have to put forth some kind of effort into it, more than what is required if you want to succeed in that class. (S4)
- Don't be lazy. Don't procrastinate. (S4) (Advice to other students)
- Take the notes! (S1)
- Look at your best friends notes and make sure they match up. Work together. (S2)
- Invest in a binder to be organized. (S3)
- one of the problems that people are not asking questions and indirectly its making them fail. (S2)

Instructors perceived About Students

- Yeah, now some of them will come in and just work their butts off. (I1)
- Referring to students with insufficient preparation: and once they are here they don't do their work. (I1)

Doing Homework

Students Perceived About Themselves

- Homework wasn't that bad. It really wasn't. It was like… its basic homework. Stuff that you would expect it to be… review and stuff like that… (S8)
- The difficulty of homework was almost exactly what you would see on the test. (S9)
- The homework wasn't too bad. It was simple because it wasn't only the fact that we did the homework (S10)
- The homework doesn't really affect anything I feel because where tests count double, the test is what really hurts. The tests count for double the grade and homework counts for one. If I did pretty well on the homework, I understood what was going to be on the test. (S11)
- Aww… I was terrible at theory. I spent a lot of nights crying over it. For me, it seemed like a lot. Maybe not for other people. (S13)
- And also having it four days a week was a bit strenuous... Cause like a lot of classes say you meet on Tuesdays and Thursdays. Well, you get an assignment on Thursday and you get all weekend until Tuesday. Or, you get it Tuesday, you have Tuesday night and Wednesday night to do it. When it's Monday through Thursday… and you could get something on Monday and he might say, "OK I need it Monday morning". And if you are already having trouble learning the stuff… (Pause)….yeah… (S13)
- Oh no, it was good. I didn't feel like it was too much or anything like that. I felt like it was exactly what I needed to start learning. (S14)
- Well, it wasn't that bad. It was difficult but to help us learn and understand the concepts. So, that was good. It wasn't like "I couldn't finish my homework" you know? (S15)
- Obviously, we covered a lot of stuff but I think I gave you a pretty good summary because like in music theory 1 you learn mostly scales and stuff… pretty basic stuff…and then ugh.. . I was going to say like for me… we did like- I can't remember if it was in music theory 1 or 2 but I think we did a little bit of it in the first one with rhythmic stuff. Anything with rhythm I was terrible at because I couldn't read umm… any of the notes… the timing… I was so bad at it (laughter) awful. (S16) (Difficulty level of homework was equal to the difficulty level of the work itself from class. Tough concepts were tough no matter whether they were faced in class or at home for homework.)
- And the homework that we had like every night was not fun but it did help! (S1)
- I remember that it wasn't like a lot. It was just enough to recognize rather or not you knew what you had been taught. (S4)
- X I didn't do anything because I didn't know how to. (S1)
- Yeah, you cannot pass theory not doing your homework because your homework is a big part of your grade. (S3)
- Homework- not doing it is like the reason I failed the first time. I just didn't do any of the homework. (S7)

Students Perceived About Other Students

- For a lot of people it's just a rude awakening because they don't study (S9)
- but there were people who repeatedly just did not do their homework at all (S15)
- People would . . . just not do their homework and do poorly on their tests (S7)

Instructors perceived About Students

- You would wonder why they are just not doing it. Some of it is their fault. (I1) (Regarding doing homework.)

Appendix G: Final Thematic Structure of the Coded Data

Theme 1: Lack of preparedness for college poses a challenge to success in Music Theory 1

- Students are not academically prepared
- Preparation for college: Knowledge of Music Theory
- Difficulty of material
- Students lack understanding of expectations at the college level
- Students lack maturity

Theme 2: Lack of appropriate effort poses a challenge to success in Music Theory 1

- Making an effort (in general)
- Doing homework
- Getting help
    - Getting help: from whom not specified
    - Getting help from instructors
    - Getting help from tutors
    - Getting help during private lessons
    - Getting help from other students
    - Getting help using online sources

Theme 3: Student characteristics pose challenges to success in Music Theory 1

- Student attitude
- Personal factors

Theme 4: Class schedule poses challenges to success in Music Theory 1

- Class schedule

Theme 5: Speed at which the course is taught poses challenges to success in Music Theory 1

- Speed
- Appropriateness of curriculum

Theme 6: Class environment poses a challenge to success in Music Theory I

- Environmental issues (are distracting)

Theme 7: Feasible solutions exist for overcoming the challenges to success in Music Theory I

Some solutions were feasible but impractical

- More lenient absentee policy
- Slow the speed of class
- Smaller class size

Some solutions were feasible and practical

- Class time
- Mentoring/Tutoring
- Offer class every semester
- Lab
- Getting more help before getting to Music Theory course
- More aural practice
- More hands on practice
- Developmental Math before Theory
- Precourse knowledge testing (students suggested)
    - Could be used to group students by ability for orientation (instructors)
    - Note: there is one given in class first or second day but it doesn't appear to be used for anything specific

Appendix H: Music Theory Lab Course Content, Objectives, and Learning Materials

Course content	Objective	Video tutorial	Reference guide	Online learning activities	Supplemental learning materials	Discussion prompt
	Unit 1: Notation					
Week 1 The staff	Student will effectively read music at an intermediate level and notate music by hand.	• Staff • Treble clef • Bass clef • Alto and tenor clefs • How to read music	Pitch	Clef reading	The staff	Summarize typical uses of inversions of V7. Be sure to provide a clear topic sentence that governs the content of the entire paragraph. Strong paragraphs will cite specific measure numbers or examples.
Week 2 Intervals	Student will aurally recognize and sing scales, intervals, triads and seventh chords, rhythmic pattern and diatonic melodies.	Understanding intervals	Perfect intervals	Intervals	The Circle of Fifths	What is music?
Week 3 Rhythm	Student will obtain and practice ear training skills and skills required for sight reading musical literature.	Basic rhythm	Rhythm	Rhythmic reading and dictation	Rhythmic equations	Write and explain what sound is and how pitch and volume influence how we perceive sound.
	Unit 2: Scales, Tonality, Key, & Modes					
Week 4 Scales	Student will understand and construct major, minor, chromatic, whole tone and modal scales.	Major scale formula	The minor scale	Scale construction and scale identification	All scales	Create an 8 measure composition with the following: • A half cadence in measure 4 and a PAC in measure 8 • A tonic chord in measures 1 and 5 • A suspension in measure 8 • An anticipation in measure 4

						• A cadential 64 at the concluding cadence • A melody line only using chord tones except at measure 4 and 8 • Rhythms of only half notes
Week 5 Transposition	Student will compose in the style of the common practice period using typical formal elements.	Transposition	What is music theory?	Transposing instruments	Modes	Describe the history of the Western music notation system, including information about the staff, pitch, and rhythm.
Week 6 Key signature	Student will define basic musical terms and theoretical concepts.	Key Signatures	Key signatures	Key signature construction and identification	Root position and ear training	Write an essay contrasting the grand staff, treble clef staff, and bass clef staff. Briefly describe the history of each and which instruments are best suited to play notes that are read on each staff.
	Unit 3: Intervals and Transposition					
Week 7 Intervals and transposition	Student will aurally recognize and sing scales, intervals, triads and seventh chords, rhythmic pattern and diatonic melodies.	• Identifying intervals • Major vs. minor scales • Transposition continued	Imperfect intervals	Interval ear training	Ear training	Is music theory the same for all instruments?
Week 8 Consonance and dissonance	Student will provide oral and written descriptions and comparisons of musical characteristics.	Consonance and dissonance	Analyzing and writing intervals	Simple time	Ear training and chord inversions	Write an essay discussing the function of sharps and flats in sheet music.

Week 9 Types of intervals	Student will aurally discern intervals, modes and chord progressions, as well as rhythmic patterns and meter. In addition the student will be able to sing intervals and scales.	Types of intervals	Diatonic intervals	Triads and major scales	Triads and major scales	Is music math?
	Unit 4: Chords					
Week 10 Melody and harmony	Student will fully analyze scores from varying stylistic periods examining melody, rhythm, harmony, form, and instrumentation.	• Melody • Harmony	Extended harmonies	Articulations and expressions	Dynamic and repeat markings	There is increasing evidence that music therapy can have a dramatic positive impact on the treatment of and recovery from illness. Complete the activity and then response with a minimum of 250 words supporting your answer.
Week 11 Triads	Student will demonstrate the ability to construct and analyze all qualities of triads and seventh chords.	Identifying triads	Triads	Chord construction	All clefs	What is piano music theory?
Week 12: inversions	Students will acquire and demonstrate music theory competency with an emphasis on inversions.	• Inversions • Inversions of chords	Using inversions	First inversion	Second inversion	What is music theory?

Note. Advanced training opportunities for each weekly lesson came from the Finale® software and Teoria© website.

Appendix I: Project Development and Implementation Timeline for Project Site

Date	Process step
	Completed
2017	
September	Gained approval from the chair of the fine arts department to develop the music theory lab
October	Technology department provided course development workspace in Blackboard
October through December	Gathered course materials from Music Theory I instructor
	Planned for Implementation
2018	
By February 1st	• Request permission from the college president to submit the music theory lab course description to the registrar's office for inclusion in the next course catalog
By the end of February	• Gain final course approval from the office of technology, the chair of the fine arts department, and the provost • Request that office of technology activate the lab course in Blackboard • Forward my course approval form to the registrar's office
Beginning of March	• Submit promotional statement about music theory lab course to fine arts department for inclusion in the music program brochure
Beginning of April	• Advertise music theory lab course during annual music audition day
Throughout May	• Advertise music theory lab course during student advising meetings
June through August	• Meet with the music education instructor to offer support with regard to the logistics of providing teaching assistants for the music theory lab sessions

	• Answer questions the music education instructor may have regarding his role in the implementation of the music theory lab course • Meet with the Music Theory I instructor to answer any questions he may have regarding his role in the implementation of the music theory lab course
August through December	• Follow up with the Music Theory I instructor and the music education instructor to ensure that the music theory lab is being implemented properly and without logistical or administrative issues
December	• Evaluate the effectiveness of the music theory lab course by determining whether rates of student withdrawal and failure decrease. • Report findings to the key stake holders: the music department chair and faculty, the fine arts department and faculty, and the vice president of academic affairs.
2019	
January through May	• Follow up with the Music Theory I instructor and the music education instructor to ensure that the music theory lab is being implemented properly and without logistical or administrative issues