

Music Student Satisfaction: The Relationship Between Learning Style Preferences and Major
Satisfaction

A Thesis Presented for the
Master of Arts
Degree
The University of Tennessee, Knoxville

Cora Marie Powers

August 2016

Copyright © 2016 by Cora Marie Powers
All rights reserved
Copies of this document may be printed from this website
for personal use without permission

ABSTRACT

Based on Holland's (1997) theory of person-environment fit, the primary purpose of this study was to examine learning style preferences of college music students utilizing the Kolb Learning Styles Inventory and VARK Learning Styles Inventory (Kolb, 1976, 1984 ; Fleming & Mills, 1992). These preferences were also explored relative to music students' satisfaction with their major. A tendency to prefer the Aural, Kinesthetic, and Active Experimentation learning styles was observed in the 134 music majors sampled. Among the music students sampled, those who most prefer the Active Experimentation learning style are most satisfied with their major. Some differences in learning style preference and satisfaction were observed between individual majors within the music program, including evidence of more diverse learning mode preferences for students in the Music Performance major. Theoretical and practical implications are discussed.

Keywords: *learning styles, satisfaction, music, performing arts*

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION AND LITERATURE REVIEW	1
Retention and Satisfaction: Person-Environment Fit.....	1
Learning Styles and P-E Fit	3
The Environment of Music School	7
Current Study	8
Research Questions	9
Research Question 1.	9
Research Question 2.	10
Research Question 3.	10
Research Question 4.	10
CHAPTER II: METHODS	12
Setting	12
Participants.....	12
Design and Procedures.....	13
Measures	13
Learning Style.....	13
Satisfaction with college major.....	14
CHAPTER III: RESULTS	15
Analysis Plan	15
Descriptive Analysis	15
Primary Substantive Analyses	15
Research Question 1	15
Research Question 2	16
Research Question 3	16
Research Question 4	16
CHAPTER IV: DISCUSSION	18
Differences in Learning Styles.....	18
Learning Style Preferences and Satisfaction	21
CHAPTER V: CONCLUSIONS	24
Practical Applications.....	24
LIST OF REFERENCES.....	26
APPENDIX.....	31
VITA	34

CHAPTER I: INTRODUCTION AND LITERATURE REVIEW

The current study was designed to expand available research on the factors related to major satisfaction for music students. Specifically, this study intended to explore the extent to which students' preferred learning styles are related to satisfaction with their music major. The present study is founded on extensive research on the topic of person-environment fit as it pertains to retention and satisfaction. Additionally, literature on learning style preferences is reviewed within the framework of person-environment fit. Finally, the specific characteristics and demands of large university music programs are considered.

Retention and Satisfaction: Person-Environment Fit

Student retention is a priority of most academic programs and understanding the optimal student and environment characteristics is one important way to improve matriculation. Only approximately 64% of students at four-year colleges and universities are graduating within six years (Radford, Berkner, Wheelless, & Shepherd, 2010). Satisfaction is a known contributor to retention in both vocational and educational settings (Browman & Nida, 2014; Oakman & Wells, 2015). Satisfaction with life is generally considered to be a primary indicator of an individual's health, happiness, and well-being and has been studied at length in a range of contexts including business and higher education. The relationship between satisfaction and the fit of an individual with his or her surrounding environment is well represented in the literature. The study of human behavior as a function of their environment has been the basis for research on person-environment fit (P-E fit), which has been investigated for over a century (Holland, 1997; Lewin, 1936; Parsons, 1909). Holland (1997) developed a model to explain the relationship between the perceived "fit" of vocational choices, including career field and job environment, with individual factors of personality, values, and traits. The purpose of Holland's work is to provide applicable

strategies for individuals when making career decisions based on personalized factors, with the intention of increasing vocational satisfaction based on perceived fitness with the vocational environment. As such, the P-E fit theory has been particularly salient and well studied within the context of vocation. Greater congruence between an individual's personality, interests, and abilities and his or her work environment has been correlated with increased satisfaction and better performance and thus more stability and higher rates of retention (Hoffman & Woehr, 2006; Kristof-Brown, Zimmerman, & Johnson, 2005; Spanjol, Tam, & Tam, 2015). At a deeper level of congruence, Hardin and Donaldson (2014) provide evidence that within a given career, the narrower 'person-job' fit better predicts satisfaction. This interaction is an important dynamic to be considered by employers as they seek to hire employees that will be stable within their position. Crafting environments congruent with employees' values, interests, and skills may be one way to increase satisfaction, thereby making it a more conducive environment for long-term employment.

Closely related to studies of P-E fit in business is the relationship between students and their educational environments. Similar to results found within vocational research, Tinto (1975, 1993) suggested that incongruence between students' and institutions' values contributes to student drop out. There is a great deal of research to support the assertion that college students who are more satisfied with life and their major are less likely to withdraw or dropout (Edwards & Waters, 1982, 1983; Kowalski, 1982). Bowman and Denson's (2014) study of "student-institution" fit illustrates that better perceived fit is directly associated with college satisfaction and indirectly with intention to persist. When students perceive a misfit between their own personal style, interests, or values and those of their educational institution, students are more likely to feel dissatisfied and more likely to discontinue their education in that setting.

Competitive academic programs seek to admit competitive students who are most likely to complete the entire program. Theory and empirical evidence support that students who are most satisfied perceive a better fit between themselves and the school and in turn are more likely to matriculate through the program.

Learning Styles and P-E Fit

Among the many individual differences that may affect the P-E fit in educational settings, students' learning preferences and classroom learning styles are particularly important in studies on academic populations. The experiential learning theory has emerged as a comprehensive explanation of the human learning process (Kolb, 1976). Kolb's (1976, 1984) experiential learning theory (ELT), based in the earlier learning theorists such as Dewey, Lewin, and Piaget, posits that learning is "the process whereby knowledge is created through the transformation of experience" rather than through outcomes. Kolb (1984) suggests three developmental stages of learning: (1) acquisition, where basic cognitive abilities develop, from birth to adolescence (2) specialization, during school and early adulthood, where various socialization experiences contribute to development, and (3) integration, later in life, when nondominant learning modes are expressed. Throughout this developmental process, individuals establish preferred methods of learning based on varying personal factors, like past experiences and environment.

Kolb's Learning Style Inventory (LSI) is commonly used to assess learners' preferred ways of dealing with information on two dimensions: abstractness vs. concreteness and reflection vs. activity. These learning methods are combined, using an individual's response pattern, to identify which stage, or learning mode, of the approach is most preferred: Concrete Experience, Abstract Conceptualization, Active Experimentation, and Reflective Observation. Concrete Experience learners tend to prefer settings in which they can learn and make judgments

based on feelings and often like to be directly involved with planning and experimentation in the learning process. Learners with a dominant Abstract Conceptualization mode are analytical, logical, and concise, and tend to place great importance on theory and abstract concepts. The Active Experimentation mode individuals show a preference for hands-on experiences and tend to be action-oriented learners. Those individuals with more of a focus on review and reflection of the material to be learned or on objective observations of others tend to be dominant in the Reflective Observation mode of learning (Kolb, 2005). Although individuals may express a preference for one particular level of this experiential learning cycle, the stages are considered to be supportive of one another with one leading into the next (Kolb & Fry, 1974).

Kolb's Learning Style Inventory has been used to assess learning style preferences in a wide range of academic and non-academic domains. Similar to theories of P-E fit, the experiential learning model asserts that "learning results from synergetic transactions between the person and the environment" (Kolb & Kolb, 2005). Across various fields, particular majors and professions have been shown to correlate with certain learning styles preferences, based on Kolb's theoretical framework for each learning mode. Studies of college nursing and midwifery students provides evidence that individuals with more concrete learning styles, focusing on experiences of feeling and thinking, are more likely to choose these people-oriented professions (D'Amore, James, & Mitchell, 2011; Cavanagh, Hogan & Ramgopal, 1995; Laschinger & Boss, 1984). Learning preferences of students in an introductory accounting course were assessed using the LSI to examine the role of learning style preferences in the use of various assessment methods. On the basis of their results, the authors argue that different learning style preferences may incline students to study, prepare, and perform differently, and therefore they assert that traditional assessments alone may not be appropriate evaluation for student success, advocating

instead for alternative methods for assessing performance (Tan & Laswad, 2015). Studies comparing the personality traits and learning style preferences of international managers found a positive correlation between extroversion and preference for an experiential learning mode, while also providing evidence that Kolb's learning style model is related to, but distinct from, personality (Li & Armstrong, 2015). Evidence of relationships between learning style preferences and academic or vocational field selection and satisfaction provided in these studies is fitting with PE-fit literature and provides empirical support for Kolb's ELT.

Another approach to understanding learning style differences and preferences can be conceptualized using the VARK model. Theoretical underpinnings of the VARK model are based on individual differences in sensory modality preferences for classroom learning. Impetus behind the creation of the VARK was the researchers' direct involvement with teacher training experiences which led to awareness of issues in implementing teaching methods that would be well-received by all students. Through their experiences and empirical research, Fleming and Mills (1992) asserted that greater understanding of learning preferences and strengths would be of greater benefit to students, in order that they could seek appropriate settings, materials, and resources for optimal learning.

Based on this theory, Fleming and Mills sought to develop a simple instrument for practical application with students and teachers, which would differentiate between an individuals' preferences for information presented through a variety of sensory modalities. The resulting VARK (i.e. Visual, Aural, Read/Write, and Kinesthetic) Learning Styles Inventory, measures perceptual preferences in terms of these four perceptual learning modes. Learners with Visual preferences appreciate the use of graphics and symbolic representation of material and may benefit from instruction using slides or pictures. Aural mode learners prefer information

that can be heard and may enjoy the inclusion of sound clips or music in learning settings. Those who prefer material communicated through printed language are in the Read/Write perceptual mode and may be particularly interested in reading information on their own and writing responses to display information learned. Finally, those who prefer to connect with material to be learned through experience or simulation fall into the Kinesthetic perceptual mode. Kinesthetic learners may appreciate moving around a physical space or engaging in physical motions (Fleming & Mills, 1992). Learners often tend to have a dominant preference for a single perceptual mode, but the VARK model allows for expression of multi-modal learning preferences.

Since its development, the VARK LSI has been used with a wide range of academic populations (Fleming & Mills, 1992). A study of college economics students emphasized the importance of attention to learning preferences in both teaching and learning approaches. Settings that cater to the learning preferences of the students was shown to enhance both student experience and learning outcomes (Wright & Stokes, 2015). Katsioloudis and Fantz (2012) utilized the VARK Learning Styles Inventory to assess the learning and teaching preferences of college students and instructors in Engineering, Industrial, and Technology Education fields. With the exception of technology education majors, individuals sampled demonstrated a significant preference for the Kinesthetic learning style, as expected by the researchers, based on the nature of the academic field. Students in technology education, however, showed a significant preference for the Read/Write learning mode. More to the topic of the present research, one study of college music students in Thailand provides empirical support for a significant correlation between this population and preferences for the Aural learning modality, with 62.7% of unimodal learners demonstrating a significant auditory preference. Additionally,

this study of musicians provides additional empirical support for the existence of multimodal preferential learning, with 66.1% of students demonstrating two or more dominant learning preferences (Tanwinit & Sittiprapaporn, 2010).

Within the field of music, and the larger performing arts category, there is currently a lack of empirical attention to the relationship between preferred learning style and setting congruence with students' satisfaction with their major. Both the Kolb Learning Styles Inventory and the VARK Learning Styles Inventory have been used with a wide range of academic and vocational populations as a means of understanding theories of P-E fit. The specific demands and characteristics of each of the target environments must be understood and accounted for to maximize congruence and satisfaction of its members.

The Environment of Music School

High demands are placed on students in music programs at large universities during the application and admittance process as well as throughout the program itself. In addition to meeting the minimum requirements for admittance to the university, students applying to competitive music school programs are also required to audition and go through an interview process to determine their admission. Once admitted to the School of Music and university, students carry a rigorous credit hour load of 15-18 hours per semester, which is typically comprised of 9-11 individual classes. Unlike majors and courses in other departments, classes offered through the music school are often worth only one credit hour, while meeting between 3 to 6 hours per week. A majority of departmental classes are capped at 25 to 30 students, however many courses enroll fewer than 10 students to allow instructors to assess progress and provide access to instruments (e.g., methods courses). In addition to regular classes and associated homework, students must be enrolled in an ensemble, for which they must audition.

Ensembles require practice, rehearsal, and performance time in addition to practice of music for compulsory private lessons. For instance, despite marching band being a one credit hour course, students are required to attend daily rehearsals as well as regular performances, adding up to approximately a 10-hour commitment per week. Additionally, within these ensembles, members must compete for their chair, solos, and leadership positions.

Differences in obligations exist between majors within the school of music. Students in music performance majors compete for positions and chairs in high level performance groups and are typically involved in external performances. Students in music education are expected to be involved with music in local school systems and often assist with direction and leadership for local bands and musical organizations, such as youth symphony.

Current Study

Previous research has provided a great deal of evidence for describing the importance of the relationships between P-E fit and satisfaction in the context of the business world and certain domains of higher education. Learning style preferences have been studied in selective educational settings, but to date have not been investigated in the realm of college music students. Further, the specific relationship between learning style preferences and college major satisfaction has not yet been examined despite the theoretical and empirical support for the importance of person-environment congruence. Understanding the nature of the relationships between learning preference factors and students' major satisfaction is an important component to be considered when seeking to develop more appropriate strategies for improving satisfaction and encouraging retention in academic music programs. Based on P-E fit theories and evidence from previous studies of satisfaction and learning styles, when students perceive a fit between their own learning style preferences and the learning environment provided in the program or

major, we expect to find a positive relationship between those preferred styles and major satisfaction. Conversely, if students perceive incongruence between their own learning style preferences and those implemented in the learning environment, we expect to observe greater dissatisfaction with their major, as evidenced by negative correlation between learning style and satisfaction. Thus, the current project sought to address the following research questions

Research Questions

Research Question 1. How do music students' learning style preferences relate to their major satisfaction?

Based on theories of P-E fit, it is expected that when students perceive that their most preferred learning styles are present in the learning environment, satisfaction with the major will be greater. Music school environments involve regular interaction with music through listening, composition, and performance via classes and related experiences. Based on the nature of the programs, it is expected that students with a preference for aural presentation of information will be most satisfied, if their preference for auditory learning is being met. Students with a preference for Kinesthetic learning will be satisfied with their major based on the amount of physical interaction that is present in the environment through performance classes and groups. Similarly, students with a preference for Active Experimentation that are offered numerous opportunities for hands-on involvement within the music major will have greater major satisfaction will be present. Higher education majors inherently include a good deal of visual stimulus and often include reading and written assignments. As discussed further below, it is hypothesized that music students will have a lack of preference for material presented visually, and as such, it is expected that a negative relationship exists between major satisfaction and visual learning styles.

Research Question 2. Which of the four VARK perceptual learning styles (Visual, Aural, Read/Write, Kinesthetic) is most preferred by music students?

As discussed above, an inherent characteristic of college music programs is an emphasis on auditory learning. Likewise, all music majors are expected to have direct, hands-on interaction with music production. It is expected, therefore, that music students will demonstrate a preference for the Auditory and Kinesthetic perceptual learning modes, while indicating a lack of preference for the Visual and Read/Write perceptual modes of learning. A previous study of college music populations provides initial support for this hypothesis (Tanwinit & Sittiprapaporn, 2010).

Research Question 3. Which of the four Kolb Learning Styles (Concrete Experience, Reflective Observation, Abstract Conceptualization, and Active Experimentation) is most preferred by music students?

It is hypothesized that music students will prefer the Concrete Experience and Active Experimentation learning styles and will not prefer the Reflective Observation and Abstract Conceptualization modes of learning. These expectations are based on the characteristics of college music programs listed above. Playing music involves direct, tactile experiences with instruments or voice. These common experiences fit well with a preference for Active Experimentation, but may not align well with Abstract Conceptualization modes of learning. In the same manner, it is expected that when music students are not actively playing, they prefer to learn through experiencing or feeling rather than through more distant, analytic observation.

Research Question 4. How do Music Education and Music Performance majors differ in learning style preferences?

There are a number of differences in the course work and expectations for Music Education and Music Performance majors. As discussed previously, it is hypothesized that Music Education and Music Performance majors will demonstrate common preferences for the Aural and Kinesthetic learning modes of the VARK, and the Active Experimentation learning style of the Kolb LSI. Conversely, it is expected that both Music Education and Music Performance majors will have a lack of preference for the Visual learning style. When considered separately, however, it is expected that Music Education majors will show a greater preference for the Read/Write perceptual mode as well as Abstract Conceptualization learning style. The Music Education program focuses on developing students into music instructors through field experiences with teaching and directing at various levels of education. Much of their course content is intended to educate students to become educators themselves, rather than centering on musical performances. Within the Music Performance major, students spend much of their time perfecting playing technique, practicing skills, preparing for musical performances and competitions, and attending performances of other groups and musicians. Based on these demands, Music Performance majors are expected to demonstrate a greater preference for the Concrete Experience learning style.

CHAPTER II: METHODS

Setting

Data were collected from students enrolled in the School of Music at a large southeastern university. There are approximately 300 total music students in the department, about 80 of which are graduate level students. Within the school, each year there are approximately 100 undergraduates in music education (Bachelor of Music) and music performance (Bachelor of Music and Bachelor of Arts) majors. Approximately 50 students are enrolled in other concentrations within the school of music and another 50 are earning a minor in the field. Additionally, there are nearly 80 graduate level students enrolled in the School of Music. For the purpose of this study, the category of music performance majors includes a number of specific major concentrations including Applied Music, Brass Instruments, Organ, Piano, Strings, Studio Music and Jazz, Voice, and Woodwind and Percussion Instruments.

Participants

Data were collected from 134 music major students at a large southeastern university. Both graduate ($n = 31$) and undergraduate ($n = 102$) students participated in the study. Participants' ages ranged from 17 to 69 with a mean age of 20.73 years. Regarding gender, 73 participants identified as male, 60 as female, and 1 as FTM transgendered. With respect to race, 81.3% of the participants identify as White, 9.0% identify as Black, 4.5% as bi-racial, 2.2% Hispanic, 2.2% Asian, and 0.7% as American Indian. Within the music program, responses from two individual majors were analyzed: Music Education ($n = 54$) and Music Performance ($n = 42$).

Design and Procedures

The present study represents a single measurement field study. The participants were invited to take part in the study based on their enrollment in the university's School of Music. Data were collected during the Fall and Spring semesters of the 2014-2015 academic year and the Fall semester of 2015. Each student completed a packet of pencil and paper questionnaires, which included demographic information. Students were given no incentive or reward for their participation. The university's Institutional Review Board approved the study. Participants signed an informed consent statement prior to participation in the study.

Measures

Learning Style.

Learning Styles preferences were assessed using two independent inventories: Kolb's Learning Style Inventory (LSI) and the Visual, Aural, Read/Write, and Kinesthetic Questionnaire (VARK). The LSI is a 12-item self-report test measuring an individual's strengths and weaknesses in learning, based on the experiential learning theory (Kolb, 1976, 1984). The LSI utilizes a 4-level rating scale (4 = most like you, 1 = least like you) to identify scores in four modes: Active Experimentation (Doing), Reflective Observation (Reflecting), Concrete Experience (Experiencing), or and Abstract Conceptualization (Thinking). The measure includes items such as "When I learn: A) I like to deal with my feelings, B) I like to think about ideas, C) I like to be doing things, D) I like to watch and listen." The LSI has been shown to be both a valid and reliable instrument for assessing individuals' preferred method of learning. The LSI's reliability, as measured with Cronbach's alpha coefficients, has been shown to range between 0.77 and 0.84. Test-retest reliability correlations are above .9 (Kolb and Kolb, 2005).

The VARK Questionnaire is a 16-item multiple-choice self-report instrument, which assesses an individual's preferred learning style/s (Fleming, 1992). The Questionnaire assesses to what degree an individual prefers learning materials presented in a visual (diagrams, pictures), auditory (discussion), iconic (reading, writing), or kinesthetic (tactile stimuli, sensory engagement) manner. An example item from the measure is "Do you prefer a teacher or a presenter who uses: A) demonstrations, models or practical sessions, B) question and answer, talk, group discussion, or guest speakers, C) handouts, books, or readings, D) diagrams, charts or graphs." The VARK's estimated reliability coefficients, based on confirmatory analysis, have been shown to be adequate, with coefficients ranging from 0.77 to 0.85 (Leite, Sviniki, & Shi, 2010).

Satisfaction with college major.

The Satisfaction Scales for College Students is a 22-item measure that utilizes a 7-point Likert scale (1 = Very Dissatisfied, 7 = Very Satisfied) to assess participants' General Life Satisfaction and College Satisfaction. The Satisfaction Scale for College Students was developed for the college population from a conceptual model of overall life satisfaction by Andrew and Withey (1976). While assessing college students' overall satisfaction with life as a whole, this measure includes a subscale for major satisfaction specifically. Six items, such as "How much you are learning in school" and "Your academic major," make up this subscale, which was examined in the present study. The Satisfaction Scales for College Students has demonstrated adequate reliability, with a coefficient alpha of 0.86 (Lounsbury, Suadargas, Gibson, & Leong, 2005.)

CHAPTER III: RESULTS

Analysis Plan

Pearson's correlation was used to examine the relationships between Learning Style Preferences and Major Satisfaction. One-Sample *t*-tests were used to compare the learning style preferences of all music majors as well as for Music Education and Music Performance majors separately.

Descriptive Analysis

Prior to running data analyses, the data set was cleaned and checked for errors. Three non-music major participants were removed from the data set. The eight Learning Style variables were recoded into numerical values to allow for analyses.

In total, 137 individuals participated in the data collection. After removing the three non-music major subjects, 134 individuals' responses were used, including responses from 54 Music Education and 42 Music Performance majors. Categorical means for each variable were calculated based on individual participants' scores. Each participants' scores for the two sets' (VARK and LSI) four learning styles were ranked, producing an ordinal list for each individual. The average rank for each of the variables was calculated to determine overall average rank. (See Tables 1 through 4.)

Primary Substantive Analyses

Research Question 1. How do music students' learning style preferences relate to their major satisfaction?

There is a positive, significant correlation between all music students' major satisfaction and the Active Experimentation learning style ($r = .18, p < .05$). Music Performance students' major satisfaction positively and significantly correlates with both the Reflective Observation (r

= .35, $p < .05$) and Active Experimentation ($r = .42$, $p < .01$) learning styles. There were no significant relationships found between major satisfaction and learning style for Music Education majors. (See Table 1 for complete results.)

Research Question 2. Which of the four VARK perceptual learning styles (Visual, Aural, Read/Write, Kinesthetic) is most preferred by music students?

Based on magnitude and rank of the overall scores, music students as a whole show a significant preference for the Kinesthetic ($M = 5.69$, $t = 3.03$, $p = .003$, $M_{rank} = 1.99$) and Aural ($M = 5.80$, $t = 3.30$, $p = .001$, $M_{rank} = 2.08$) learning styles. In general, music students show a significant lack of preference for the Visual learning style ($M = 3.49$, $t = -7.01$, $p < .001$, $M_{rank} = 2.97$). (See Tables 3 and 4 for complete results.)

Research Question 3. Which of the four Kolb Learning Styles (Experiencing, Reflecting, Thinking, Doing) is most preferred by music students?

Based on magnitude and rank of the overall scores, music students as a whole show a significant preference for the Active Experimentation learning style ($M = 32.32$, $t = 4.28$, $p < .001$, $M_{rank} = 1.91$). Music students show a significant lack of preference for the Concrete Experience learning style ($M = 25.00$, $t = -6.45$, $p < .001$, $M_{rank} = 3.12$). (See Tables 3 and 4 for complete results.)

Research Question 4. How do Music Education and Music Performance majors differ in learning style preferences?

V.A.R.K. — Based on magnitude and rank of scores, Music Education students ($n = 54$) show a significant preference for the Auditory learning style ($M = 5.74$, $t = 2.11$, $p = .04$, $M_{rank} = 2.02$) and a significant lack of preference for the Visual learning style ($M = 3.48$, $t = -4.16$, $p < .001$, $M_{rank} = 3.04$). Music Performance students ($n = 46$), however show preferences for the

Auditory (strongest by magnitude), Reading/Writing (highest ranked), and Kinesthetic learning styles, with no significant differences between the three. There is significant lack of preference for the Visual learning style ($M = 3.62$, $t = -4.58$, $p < .001$, $M_{rank} = 3.00$).

Kolb Learning Styles — Based on magnitude and rank of scores, Music Education students show a significant preference for the Active Experimentation learning style ($M = 32.74$, $t = 3.01$, $p = .004$, $M_{rank} = 1.93$) and a significant lack of preference for the Concrete Experience learning style ($M = 25.17$, $t = -5.70$, $p < .001$, $M_{rank} = 3.13$). Similarly, Music Performance students show a significant preference for the Active Experimentation learning style ($M = 32.43$, $t = 2.47$, $p = .018$, $M_{rank} = 1.98$) and a significant non-preference for the Concrete Experience learning style ($M = 26.76$, $t = -2.50$, $p = .017$, $M_{rank} = 2.86$). (See Table 2 for complete results.)

CHAPTER IV: DISCUSSION

The present study was intended to further the research on learning style preferences of music students and to explore the extent to which students' preferred learning styles are related to satisfaction with their music major. Theories of P-E fit suggests that individuals are most satisfied and tend to seek work (or learning) contexts in which they perceive congruence between their own values, skills, and interests and those of the organization or institution (Hoffman & Woehr, 2006; Kristof-Brown, Zimmerman, & Johnson, 2005; Spanjol, Tam, & Tam, 2015). Additionally, students are most likely to remain involved when they are more satisfied with the perceived P-E fit (Edwards & Waters, 1982, 1983; Kowalski, 1982). The academic environment of a collegiate music program places a unique set of demands on its students and it is a priority to retain students in the major after significant time and resources have been invested in their recruitment, training, and education. Music majors have additional required practice and performance expectations which extend beyond the general demands of college life. Those students who feel that aspects inherent to this environment fit well with their own preferences and styles tend to be more satisfied with their music major. Students who perceive greater congruence and experience higher levels of satisfaction are more likely to remain enrolled in the major.

Differences in Learning Styles. The Kolb LSI provides four categories of leaning style preferences. Concrete Exerience, in which learners prefer being involvement with planning and experiementation, Abstract Conceptualization, in which learners value theory and abstract concepts, Active Experimentation, in which individuals prefer hands-on experiences, and Reflective Observation, in which learners reflect and review information (Kolb, 2005). The

VARK LSI categorizes learners based on four sensory preferences: Visual, Aural, Read/Write, and Kinesthetic (Fleming & Mills, 1992).

As a whole, sampled music students tend to prefer the Aural, Kinesthetic, and Active Experimentation learning styles and least prefer the Visual and Concrete Experience learning styles. Based on Kolb's Experiential Learning Theory, the working interaction between the learning environment and student's modal preferences is the basis of learning (Kolb & Kolb, 2005). In that vein, as predicted based on previous empirical results from Tanwinit and Sittiprapaporn (2010), preference for aural learning seems intuitive within the field of music, where hearing, understanding, and producing musical sounds play a crucial role. Similarly, music students' preference for the Kinesthetic and Active Experimentation learning styles also fit well with the more active learning domains of the major, such as using instruments or voice to practice and perform as means of learning. The significant lack of preference for visual and Concrete Experience learning styles is present for all music students sampled as well as in the two individual majors examined. The structure of many college classes relies heavily on information presented in a visual manner (i.e. PowerPoint presentations, etc.), however, the current study illuminates an incongruence between this common style of presentation and student learning preferences. A similar incongruence exists for Concrete Experience learning styles. Music students do not prefer involvement with the logistics and planning as a means of learning, but instead enjoy getting to take part in the activity. This incongruence may be highlighted in music classes with a heavy focus on theory where physical engagement with material is not as present.

Concerning specific music major categories, some differences in learning style preferences are suggested by the results. Music Performance students tend to prefer a

combination of the Aural, Reading/Writing, and Kinesthetic learning styles, with no significant differences of magnitude or rank among the three modes. This result suggests that students within the Music Performance major may vary more widely in their learning preferences and, as a whole, may benefit most from a learning environment that provides experiences engaging all perceptual modes of learning. Additionally, the VARK model specifically allows for expression of multiple learning modal preferences, which could weaken the appearance of preference for any one individual learning style in the results. Students enrolled in the Music Performance major within the music program are involved with regular practice and performance with their instruments—in other words, “doing” specific music related activities as part of the learning process. As such, the significant preference for an Active Experimentation learning style aligns well with many of the specific demands of a performance based major.

As with the whole sampled group, there was a clear lack of preference the Visual and Concrete Experience learning styles for Music Performance and Music Education students, indicating that in this area, there are few differences between specific majors. Very similar to the Music major sample as a whole, Music Education students are most likely to prefer the Aural, Kinesthetic, and Active Experimentation learning styles. The identified preferences for learning styles, as a whole, tend to fit well with many of the unique demands and skill sets inherent to an academic music program.

As in previous studies with other academic populations, students in the School of Music tend to have similar learning style preferences. Just as nursing and midwifery students tend to prefer more concrete emotional and *feeling* experiences, music students, as a whole, demonstrate a preference for hands-on, tactile learning environments that provide them with opportunities for Active Experimentation (D’Amore, James, & Mitchell, 2012; Hogan & Ramgopal, 1995;

Laschinger & Boss, 1984). Similarly, as supported by Tanwinit and Sittiprapaporn (2010), the Aural learning preferences seen on the VARK are fitting with the auditory demands of a music oriented major. Across both the Kolb and VARK learning style measures, congruence between students' learning style preferences and environmental characteristics are apparent. These findings contribute to the ongoing development of literature regarding P-E fit on the basis of learning modality and academic environment.

Learning Style Preferences and Satisfaction. Based on theories of P-E fit, when music student's preferences are being met by their program or specific major, we expect to find a positive relationship between the most preferred learning styles and major satisfaction. When the academic program or major environments rely heavily on one of the non-preferred learning styles, we expect to find greater dissatisfaction with the major, demonstrated in negative relationship to major satisfaction. This relationship between P-E fit and satisfaction has been well-established in previous research (Hoffman & Woehr, 2006; Kristof-Brown, Zimmerman, & Johnson, 2005; Spanjol, Tam, & Tam, 2015). In the present study, music students with a preference for the Active Experimentation learning style are, in general, significantly most satisfied with their music major. Concerning differences between the two specific music majors, Music Performance students with a preference for either the Active Experimentation or Reflective Observation learning styles are more likely to be satisfied with their music major, while no significant correlations were found for Music Education students.

Based on this positive correlation and the general preference of the sampled music majors for the Active Experimentation learning style, we can infer that the current program is likely meeting the *doing* needs of many of its students. The lack of significance in the relationships between the other preferred learning styles and major satisfaction indicates that some music

students do not feel that they are currently receiving as much engagement with these learning styles as they would prefer. Conversely, it can also be inferred that it is unlikely that students feel that instruction relies too heavily upon their non-preferred learning styles. Overall, music students do not feel that there is more visual material presented than they would prefer, as evidenced by the lack of significant dissatisfaction for this learning mode. Although as a whole, music majors most prefer Aural, Kinesthetic, and Active Experimentation learning styles, students only report feeling satisfied with the amount of Active Experimentation learning involved in the major at this time.

Within the Music Performance major, students most prefer the Active Experimentation learning style. The significant relationship between the Active Experimentation learning style and major satisfaction indicates that students' preferences are being met in this domain. Although students do not significantly prefer the Reflective Observation learning style, there is a significant relationship between those students with a preference for Reflective Observation and major satisfaction. Results of this study indicate that Music Performance majors prefer the Active Experimentation learning style and as a whole feel that they are receiving enough classroom instruction that engages the Active Experimentation and Reflective Observation styles to feel satisfied in these areas. They are not receiving more of the Visual or Concrete Experience styles than they would prefer, as evidenced by the lack of significant dissatisfaction, however they may be more satisfied with the greater inclusion of Aural, Reading/Writing, and Kinesthetic learning styles in the major.

Students in the Music Education major showed no significant correlations between their preferred learning styles and major satisfaction. The observed lack of significant positive relationships indicates that students do not feel that their preferences for Aural and Active

Experimentation styles are being fully met in the major's learning environment. At the same time, Music Education students do not feel that they are receiving more instruction in the Visual or Concrete Experience learning styles than they would prefer, as shown by the lack of negative correlations.

CHAPTER V: CONCLUSIONS

Practical Applications. Application of learning style theories in classroom settings has often been poorly implemented up to this point. In some instances, when learning preferences were identified, courses may have been shaped to cater to one particular learning style. Narrowing classroom teaching style to reflect only the most preferred learning styles will likely lead to greater dissatisfaction of students with preferences for other types of material presentation. Instead, classroom learning that includes presentation of material using a combination of a maximal number of styles will provide all students the opportunities to engage in learning in the manner that is most preferred.

Students' satisfaction with their music major could be addressed by increasing the diversity of learning styles utilized and specifically providing opportunities for engagement with the most desired learning styles as a structural component of the academic program and specific classes. With regard to the music student population, our study suggests a strong preference for Aural learning—a preference not met to satisfaction at this point. Inclusion of additional auditory components in lectures and classroom activities (i.e. inserting sound clips in to slideshows, hearing songs performed prior to learning or studying the music) may provide students with opportunities for engagement with this particular style at a more satisfying level. The general preference for Kinesthetic learning could be tapped into by providing class opportunities for students to be physically active by practicing the fingering of notes, playing concepts on instruments, conducting along with music, or imitating rhythms or scales throughout lectures.

Developing learning environments that provide opportunities for students to engage in perceptual modes that best fit personal preferences may be one way to directly increase student

satisfaction and perceptions of person-environment fit. Rather than catering entire classes to attend to only the most preferred learning styles, educators would do well to diversify learning opportunities and course requirements to allow for and encourage multimodal engagement from students. Increasing major satisfaction by developing more diverse learning environments based on music students' preferences, skills, and interests may be a key way for educators and program directors to improve student retention in collegiate academic music programs.

LIST OF REFERENCES

- Andrew, F. & Withey, S. (1976). *Social Indicators of Well-Being*. Plenum, New York.
- Bowman, N. A., & Denson, N. (2014). A missing piece of the departure puzzle: Student–institution fit and intent to persist. *Research in Higher Education*, 55(2), 123-142.
doi:<http://dx.doi.org/10.1007/s11162-013-9320-9>
- Cavanagh, S. J., Hogan, K., & Ramgopal, T. (1995). The assessment of student nurse learning styles using the Kolb Learning Styles Inventory. *Nurse Education Today*, 15(3), 177-183.
- D'Amore, A., James, S., & Mitchell, E. (2012). Learning styles of first-year undergraduate nursing and midwifery students: A cross-sectional survey utilising the Kolb Learning Style Inventory. *Nurse Education Today*, 32(5), 506-15.
- Edwards, J. E., & Waters, L. K. (1982). Involvement, ability, performance, and satisfaction as predictors of college attrition. *Educational and Psychological Measurement*, 42(4), 1149-1152.
- Edwards, J. E., & Waters, L. K. (1983). Predicting university attrition: A replication and extension. *Educational and Psychological Measurement*, 43(1), 233-236.
- Fleming, N.D. and Mills, C. (1992), Not Another Inventory, Rather a Catalyst for Reflection, To Improve the Academy, Vol. 11, 1992., page 137.
- Hardin, E. E., & Donaldson, James R., I., II. (2014). Predicting job satisfaction: A new perspective on person–environment fit. *Journal of Counseling Psychology*, 61(4), 634-640. doi:<http://dx.doi.org/10.1037/cou0000039>
- Hoffman B. J., Woehr D. J. (2006). A quantitative review of the relationship between person-organization fit and behavioral outcomes. *Journal of Vocational Behavior*, 68(3), 389–399

- Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Kolb, D. A., & Fry, R. E. (1974). *Toward an applied theory of experiential learning*. MIT Alfred P. Sloan School of Management.
- Kolb, D. (1976). *Learning style inventory*. Boston: McBer and Company.
- Kolb, D. (1984). *Experiential learning: Experience as the source of learning development*. Englewood Cliffs, NJ: Prentice Hall.
- Kolb, A. Y. (2005). *The Kolb learning style inventory—version 3.1 2005 technical specifications*. Boston, MA: Hay Resource Direct, 200.
- Kowalski, C. J. (1982). College dropouts: Some research findings. *Psychology: A Journal of Human Behavior*.
- Kristof-Brown A., Zimmerman R., Johnson E. (2005). Consequences of individuals' fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology*, 58(2), 281–342
- Laschinger, H. K. and Boss, M. W. (1984). Learning styles of nursing students and career choices. *Journal of Advanced Nursing*, 9: 375–380. doi: 10.1111/j.1365-2648.1984.tb00386.x
- Leite, W., Svinicki, M., & Shi, Y. (2010). Attempted Validation of the Scores of the VARK: Learning Styles Inventory with Multitrait–Multimethod Confirmatory Factor Analysis Models. *Educational and Psychological Measurement*, 70(2), 323-339.
- Lewin, K. (1936). *Principles of topological psychology*. New York: McGraw-Hill.
- Li, M., & Armstrong, S. J. (2015). The relationship between Kolb's experiential learning styles and big five personality traits in international managers. *Personality and Individual*

- Differences, 86, 422-426.
- doi:<http://dx.doi.org.proxy.lib.utk.edu/90/10.1016/j.paid.2015.07.001>
- Lounsbury, J. W., Saudargas, R. A., Gibson, L. W., & Leong, F. T. (2005). An investigation of broad and narrow personality traits in relation to general and domain-specific life satisfaction of college students. *Research in Higher Education*, 46(6), 707-729.
- Oakman, J. and Wells, Y. (2015), Working longer: What is the relationship between person–environment fit and retirement intentions?. *Asia Pacific Journal of Human Resources*. doi: 10.1111/1744-7941.12075
- Parsons, F. (1909). *Choosing a vocation*. Boston, MA: Houghton Mifflin.
- Radford, A. W., Berkner, L., Wheelless, S. C., & Shepherd, B. (2010). Persistence and attainment of 2003–04 Beginning Postsecondary Students: After 6 years (NCES 2011-151). Washington, DC: U.S. Department of Education.
- Spanjol, J., Tam, L., & Tam, V. (2015). Employer–employee congruence in environmental values: An exploration of effects on job satisfaction and creativity. *Journal of Business Ethics*, 130(1), 117-130. doi:<http://dx.doi.org/10.1007/s10551-014-2208-6>
- Tan, L.M., & Laswad, F. (2015). Academic Performance in Introductory Accounting: Do Learning Styles Matter?, *Accounting Education*, 24:5, 383-402, DOI: 10.1080/09639284.2015.1075315
- Tanwinit, A., & Sittiprapaporn, W. (2010). Learning Styles of Undergraduate Musical Students Attending Music College in Thailand. *Revista Electrónica De LEEME*, (25), *Revista electrónica de LEEME*, 2010, Issue 25.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45, 89–125.

Tinto, V. (1993). Leaving college: Rethinking the causes and cures of student attrition (2nd ed.).

Chicago: University of Chicago Press.

Wright, S., & Stokes, A. (2015). The Application of VARK Learning Styles in Introductory

Level Economics Units. *Issues in Educational Research*, 25(1), 62-79.

APPENDIX

Table 1
Correlations between Learning Styles and Major Satisfaction

	<i>V</i>	<i>A</i>	<i>R</i>	<i>K</i>	LSI-CE	LSI-RO	LSI-AC	LSI-AE
All Music Majors (<i>N</i> =134)	-.07	.05	.12	-.01	.02	.06	.01	.18*
Music Ed (<i>n</i> =54)	-.07	.09	.16	-.05	.06	-.05	-.03	.06
Music Performance (<i>n</i> =42)	-.20	-.09	.17	.10	.18	.35*	-.04	.42**

* $p < .05$, ** $p < .01$

Table 2
Music Majors: Results of One-Sample t-test

Scale	<i>Mean (SD)</i>	<i>t</i>	<i>p</i>	Rank Average (SD)
V	3.49 (2.49)*	-7.01*	<.001	2.97 (1.07)*
A	5.80 (2.80)*	3.30*	.001*	2.08 (1.10)*
R	5.02 (2.48)	0.10	.92*	2.23 (0.98)
K	5.69 (2.62)*	3.03*	.003*	1.99 (0.95)*
LSI- CE	25.00 (7.46)*	-6.45*	<.001*	3.12 (1.05)*
LSI- RO	29.72 (8.05)	0.82	.56	2.34 (1.09)
LSI- AC	29.60 (8.45)	0.60	.44	2.46 (1.07)
LSI- AE	32.32 (8.56)*	4.28*	<.001*	1.91 (0.97)*

Rank Average Range= 1-4

* *significant result*

Table 3*Music Education Majors: Results of One-Sample t-test*

Scale	Mean (SD)	<i>t</i>	<i>p</i>	Rank Average (SD)
V	3.48 (2.63)*	-4.16*	<.001*	3.04 (1.12)*
A	5.74 (2.68)*	2.11*	.04*	2.02 (1.04)*
R	5.13 (2.21)	0.53	.60	2.17 (1.00)
K	5.46 (2.59)	1.40	.17	2.02 (0.96)
LSI- CE	25.17 (6.79)*	-5.70*	<.001*	3.13 (1.06)*
LSI- RO	31.48 (6.98)	1.60	.12	2.24 (1.10)
LSI- AC	30.44 (6.44)	0.55	.58	2.54 (0.99)
LSI- AE	32.74 (6.79)*	3.01*	.004*	1.93 (1.01)*
<i>Rank Average Range= 1-4</i>		<i>* significant result</i>		

Table 4*Music Performance Majors: Results of One-Sample t-test*

Scale	Mean (SD)	<i>t</i>	<i>p</i>	Rank Average (SD)
V	3.62 (2.24)*	-4.58*	<.001*	3.00 (1.06)*
A	5.93 (2.75)	1.71	.095	2.24 (1.16)
R	5.69 (2.82)	1.12	.27	2.05 (0.94)
K	5.57 (2.70)	0.89	.38	2.19 (0.99)
LSI- CE	26.76 (7.04)*	-2.50*	.017*	2.86 (1.14)*
LSI- RO	29.02 (7.38)	-.040	.69	2.57 (1.11)
LSI- AC	29.69 (8.45)	0.16	.87	2.48 (1.19)
LSI- AE	32.43 (7.74)*	2.47*	.018*	1.98 (0.95)*
<i>Rank Average Range= 1-4</i>		<i>* significant result</i>		

VITA

Cora Marie Powers was born in Omaha, Nebraska to parents Dave and Jeanne Powers. She attended Olathe South High School in Olathe, KS. After graduation in 2009, she attended the University of Kansas where she obtained her Bachelor's degree in Psychology, with a minor in Leadership Studies in 2013. Cora's experiences as a collegiate student-athlete at the University of Kansas contributed to her interests in leadership development as well as sport and performance psychology. Following her graduation from the University of Kansas, Cora was accepted into the Counseling Psychology Doctoral Program at the University of Tennessee, Knoxville, where she is currently advised by Dr. Jacob Levy.