2022

Student perceptions of college marching band participation on student development goals in higher education

BOSTON UNIVERSITY

COLLEGE OF FINE ARTS

Dissertation

STUDENT PERCEPTIONS OF COLLEGE MARCHING BAND PARTICIPATION ON STUDENT DEVELOPMENT GOALS IN HIGHER EDUCATION

by

SAMUEL LANDON SANCHEZ

B.A., University of Notre Dame, 1998
M.A., University of Notre Dame, 2006

Submitted in partial fulfillment of the

requirements for the degree of

Doctor of Musical Arts

2022

Approved by

First Reader

Alison Farley, Ph.D.
Assistant Professor of Music Education
University of Georgia

Second Reader

Tiger Robison, Ph.D.
Assistant Professor of Music Education
University of Wyoming

Third Reader

Gareth Dylan Smith, Ph.D.
Assistant Professor of Music, Music Education

Fourth Reader

Karin S. Hendricks, Ph.D.
Associate Professor of Music
Chair, Music Education

DEDICATION

I would like to dedicate this work to my father, Homer Sustaita Sanchez, and my mother, Leonor “Nora” Ackerman Sanchez. They were both incredibly supportive about the importance of education and pushed me to complete a terminal degree. Without their love and support, I never would have achieved my dreams.

ACKNOWLEDGMENTS

Dr. Alison Farley – Thank you for being my advisor and for your help and support with developing this dissertation from an idea into its final product.

Committee members, Dr. Karin Hendricks, Dr. Gareth Dylan Smith, and Dr. Tiger Robison – I greatly appreciate your time reading, your constructive comments, and the encouragement you provided to get me over the finish line. And Dr. Kính Tiến Vũ – Thank you for helping me through the qualifying exams and dissertation process.

Dr. Sarah Daly – As a friend who has gone through this, I could not have done this without your academic support and friendship. You are the best!

Thank you to my close friends and family – Donelle Flick, Brendan Crise, Ken Dye, Peter Schivarelli, Denise Schivarelli, Mark Hubbard, Bridget Hubbard, Gail Walton, Craig Cramer, Russell Sanchez, Jennifer Sanchez Tester, Carly Tester, and Patric Tester.

Thank you to my college and high school band directors – Dr. Luther M. Snavely, Jr., James S. Phillips, Rev. George Wiskirchen, C.S.C., Richard Gibby, Richard Berkley, and LaMont Goodman.

Timothy McFeeters – You are my rock! I could never have done this without you!

STUDENT PERCEPTIONS OF COLLEGE MARCHING BAND PARTICIPATION ON STUDENT DEVELOPMENT GOALS IN HIGHER EDUCATION

SAMUEL LANDON SANCHEZ

Boston University College of Fine Arts, 2022

Major Professor: Alison Farley, Ph.D., Assistant Professor of Music Education, University of Georgia

ABSTRACT

The college marching band provides students with opportunities that foster student development, defined as the personal growth and identity development of students due to environmental factors in higher education. However, previous research has not focused on the role of college marching band participation in student development. The goal of this study was to broaden the understanding of its student development role, enhance development experiences, and improve culture. A self-administered survey was electronically distributed to band directors through the College Band Directors National Association email list with a request to forward it to current college marching band students. The survey contained two sections: (1) Demographic information, (2) Rating college marching band's influence on 29 student development goals, using a four-point Likert scale with the choices: strong influence, moderate influence, some influence, and no influence. Chickering and Reisser's (1993) Seven Vectors of college student development served as a theoretical framework for the creation of goals related to college marching band situations that build and reinforce a student's identity. Responses were analyzed by comparing groups based on demographic

characteristics relevant to the research questions. Results were similar to those of previous research. Women rated college marching band participation's importance higher than men, older students rated it higher than younger, and more-involved students rated it higher than less-involved students. Participants' perceptions most resonated with Chickering and Reisser's (1993) vectors *Developing Competence* and *Developing Purpose*, and resonated least with the vector *Developing Integrity*.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
CBDNA	College Band Directors National Association
CMB	College Marching Band
HBCUs	Historically Black Colleges and Universities

CHAPTER 1: INTRODUCTION

Music education intersects with student development because the impact of music education extends far beyond its musical component. As a part of music education, college marching bands have been socially and musically impactful in U.S. universities for more than a century (Garrison, 1986; Madsen et al., 2007). They have come to represent a unique subculture within the college environment that fosters community, music making, and student development.

Student development is a term used by student affairs professionals in American colleges and universities to describe the development of the whole person through information and experiences gained both in and out of the classroom in college. Rodgers (1990) defines student development as "the ways that a student grows, progresses, or increases [their] developmental capabilities as a result of enrollment in an institution of higher education" (p. 27). Long (2012), explains that student development represents "how students grow and change throughout their college experience" (p. 42). In addition to these definitions, Farley and Walker (2015) assert that one basic assumption of the student development policy is that "the total environment of the student is educational and must be used to help the student achieve full development" (p. 6). These definitions allow for both in and out-of-class experiences in higher education to contribute to the psychosocial identity development of students. Learning a skill is only one facet of student development in college (Chickering & Reisser, 1993). While music ensembles, like the college marching band, offer opportunities to develop musical skills, they also provide many experiences that foster non-musical aspects of student development.

Student Development in higher education has received considerable focus in several areas including transition to college, creation of self-identity, moral judgment, cognitive judgment, attrition, participation, engaged learning, and college impact (Evans et al., 2010; Pascarella & Terenzini, 1991). While extant research has provided vast amounts of data in both broad and specific areas of student development, few researchers have specifically assessed the role of college marching band participation.

Outside of research on student development, school band programs have received research focus in the following topic areas: factors influencing participation (Clothier, 1967; Faber, 2010; Light, 2006; McClarty, 1968; McDavid, 1999; Moder, 2013; Mountford, 1977; Tedford, 2014), teacher preparation (Ammann, 1989; Richards, 2012; Williamson, 2009), band recruitment (Kerstetter, 2011; Light, 2006; Madsen et al., 2007), persistence in band (Young, 2001), continuation in music after college marching band (Arnwine, 1996), band and physical activity (Cowen, 2006), band leadership experiences (Warfield, 2013), descriptive analyses of college band programs (Fuller, 1995; Scheivert, 2016), gender in band (Cumberledge, 2018; McKeage 2004) and band time management (Cumberledge, 2015).

Even with this array of research, there has been almost no focus on the connection between participation in a CMB and college student development. The only exception was a comparative focus on how CMB versus non-CMB students scored on the National Survey of Student Engagement (Healy, 2016). However, Healy's (2016) study was limited by the use of general college developmental tasks for survey questions as opposed to using experiences specific to the CMB participation. My method differed by surveying

only CMB members on development goals related to CMB participation to record their perceptions of how participation has influenced their own development. I also sought to discover which areas of student development are most influenced by CMB participation.

Is it important to determine the areas of student development that are most influenced by CMB participation to discover how CMB participation, as an out-of-class experience, contributes to student development and behavior. Issues like hazing and behavior in the culture of college marching bands have recently become areas of concern among students, parents, and university administrators (Kingkade, 2014; Perez, 2008; Thompson, 2016; Tyson, 2014). There are several reasons for this concern, among which is the welfare of students (Silveira & Hudson, 2015). The legal ramifications of inappropriate actions by students and the public perception influenced by media reports are also of concern to college band directors and administrators.

These topics dominated the 2015 Athletic Band Symposium of the College Band Directors National Association (Frey & Phillips, 2015). To clarify, college marching bands in the United States are titled "athletic bands" because they primarily perform at sporting events. The final day of the symposium concluded with discussions on hazing, inappropriate actions by band members, Title IX ramifications, and promoting ethical behaviors within college bands (Frey & Phillips, 2015). However, only one session from this symposium featured student development research as a foundation for implementing practices to encourage positive behavioral change in college marching bands, titled "Ethical Behavior, Discipline Management, and Effective Leadership within Organizations: Learning to Model Ethical Behaviors and Manage Discipline Among

Peers," (Gibbs, 2015). This heightened concern by college band directors, specifically with student behavior, displayed a need for more understanding about the relationship between CMB participation and student development.

Student affairs professionals try to develop and implement practices that encourage strong personal and academic growth of students, which often improves college culture and behavior (Astin, 1997; Chickering & Reisser, 1993; Pascarella & Terenzini, 1991; Rosbrook, 2019). Even with the vast amount of student development research available, it is unknown whether college band directors have applied it to the management approach of their own marching bands or have made the connections on how it supports learning beyond the classroom. Kuh (1994) asserts that "many faculty members as well as academic and student affairs administrators do not direct their energies to cultivating the natural links between what students learn in their classes to their lives outside the classroom" (p. 6). Whether or not band directors have given much thought to how their band programs and policies relate to student development, the lack of focus on the CMB in student development research has created a gap in the literature which has contributed to the difficulty in using research as a guide for creating best practices of student development in these organizations.

The Research Problem

Over the past several decades, researchers in the United States have studied college student development to identify and improve practices to increase the development, success, and satisfaction of college students. More recently, college band directors and administrators have showed concern about the cultural issues experienced

in CMBs, but they also know that CMB participation yields positive development effects too (Gibbs, 2015; Frey & Phillips, 2015). This has sparked a desire to understand and promote the development of the whole person, not just musical development. Through a review of previous research, I found that most researchers agree that extracurricular organizations are important to college student development, but that further investigation could aid in identifying the specifics of how this happens within specific organizations. To help college band directors and administrators understand and improve student development and culture, they need more information about how students view the CMB's role in achieving specific developmental goals as proscribed by previous researchers.

Extant research only allows for stake holders to make general assumptions on the role of CMB participation in student development. For example, it is known that extracurricular activities tend to improve students' feeling of belonging to their college community (Kuh et al., 1991; Strayhorn, 2013), improve student engagement if the time commitment is not excessive (Pascarella & Terenzini, 1991; Zacherman & Foubert, 2014), and provide out of class opportunities for developing social, musical, and leadership skills (Astin, 1997; Kuh et al., 1991). But it is unknown which of these areas, if any, develop students through CMB participation and experiences.

Previous student development research has primarily evaluated the role of extracurricular activities in general without narrowing the focus to specific types of activities (Dagaz, 2010). Several studies have generally examined the role of student organizations, like music groups, and their impact on student development

(Abrahamowicz, 1985; Astin, 1997; Chickering & Reiser, 1993; Eccles, 1999; Elliott, 2009; Pace, 1990; Stanford, 1990; Terenzini, 1995; Wilson, 1999). Additionally, the role of residence halls and Greek organizations, as extracurricular experiences, has received attention (Abrahamowicz, 1988; Inman, 1997; Kuh et al., 1991; Whipple & Sullivan, 1998). Although college marching bands have participatory characteristics in common with these extracurricular organizations, the CMB is culturally unique (Thompson, 2016). The unique nature of the CMB can be attributed to its beginnings and its current connection to sports and college life. American CMBs are descendants of military bands and have developed their organizational structure and use of marching drill from military bands (Madsen et al., 2007; Scheivert, 2018). CMBs also tend to have a large social component that mimics the traits of college fraternities or sororities and sports teams while functioning as a large subculture in higher education (Fuller, 1995; Silveira & Hudson, 2015). The combination of military, sports, and Greek organization culture differentiates the CMB from other college music ensembles, like choirs, orchestras, jazz bands, and concert bands as well as other extracurricular clubs and student activities. This is not to say that these groups are not social or organized, but the culture and organization of CMBs tend to function differently because of this convergence of military roots, sports, and Greek organization social characteristics. This difference makes previous research unreliable for drawing conclusions based on other ensembles or extracurricular activities.

Purpose of the Study

The purpose of this study was to explore the perceived importance of CMB

participation to the student development of college marching band students in the United States. CMB students participated in a survey on 29 development goals based on Chickering and Reisser's (1993) Seven Vectors of Identity Development. Participants rated the perceived importance of each goal on a four-point Likert-type scale, from "no influence" to "strong influence" and to provide relevant demographic information to allow for analysis of how those perceptions differed based on demographics. By focusing on the college marching band as an extracurricular experience, this study provided new CMB specific information on the role of extracurricular activities in student development. I limited the sample population to current CMB students in the United States.

Research Questions

1. How do students respond to the perceived importance of college marching band participation to development goals and the Seven Vectors of Development?
2. How do students who hold leadership positions in college marching band differ from those who do not in relation to perceived importance of development goals?
3. How do students with different numbers of extracurricular activities outside of college marching band differ in relation to perceived importance of development goals?
4. How do college marching band students respond to the perceived importance of development goals based on relevant demographic traits?

Rationale for the Study

Increased interest in the culture and behavior of college marching bands in the United States has sparked discussion among band directors on how to improve student development (Frey & Phillips, 2015). Students have also shown concern with their college band experience and the "individual growth" it provides, as displayed by the Tuskegee Marching Band's recent threat to boycott performing for their university over claims of exploitation ("Tuskegee marching band", 2021). Research on student development in higher education provides general guidance to address these concerns.

For several decades, student development researchers have studied the impact of attending college and the effects of out-of-class experiences to help student affairs professionals improve student learning and campus culture (Pascarella & Terenzini, 1991). Wilson (1966) reported that approximately 70 percent of what a student learns while in college can be attributed to out-of-class experiences. If this assertion is true, it justifies the importance of this research. When colleges and universities implement research-based changes to improve student development, the results are often positive and help students "learn to make informed ethical choices, develop a healthy sense of identity, learn to be good citizens, cultivate a deeper understanding and appreciation for differences, and so forth" (King & Howard-Hamilton, 2000, p. 34).

While researchers have explored the relationship of extracurricular activities to student development on a broad level, the results are only generally applicable to the CMB experience. Previously, researchers have tended to survey a population of students and evaluate their overall extracurricular participation as it relates to student development

rather than focus on specific extracurricular activities (Dagaz, 2010; Healy, 2016; Pascarella & Terenzini, 1991). Ensembles like the college marching band typically are grouped into broad categories like extracurricular activities or music ensembles, providing only a vague understanding of the CMBs role in student development (Broh, 2002; Eccles & Barber, 1999; Eccles et al., 2003). Dagaz (2010) supports this by stating that "studies in which marching band is included as a construct with other performing arts activities serves to dilute the impact of this experience" (p. 154).

To bridge the gap in literature and answer the research questions of this study, there was a need to focus specifically on CMB students and their CMB experience to provide band directors and administrators more understanding of its role in college student development. By focusing on the CMB, this study provided more knowledge to aid college band directors with the implementation of policies and procedures to improve student development in their band programs. Extant research validated the notion that extracurricular activities can positively affect college student development by providing opportunities to learn new skills, increasing a student's sense of belonging, encouraging teamwork, encouraging responsible behavior, and developing leadership (Harper & Quaye, 2009; Kuh et al., 1991; Kuh et al., 1994). The rationale for this study is to improve the understanding of CMB student development experiences and bridge the gap in student development literature on the role of the CMB.

Theoretical Frameworks

Researchers have used several different theories and frameworks to predict outcomes in student development research. Pascarella and Terenzini (2005) classify these

into two broad families: Developmental Theories and College Impact models. Under developmental theories, four categories exist: psychosocial development, cognitive-structural theories, typology models, and person-environment interaction theories. College Impact models are less rooted in the work of other theorists, and are generally less specific in their explication (Pascarella & Terenzini, 2005, p. 18).

The primary theory utilized in this study is Chickering's Seven Vectors of Student Development (Chickering & Reisser, 1993). It is a psychosocial development theory based on the notion that development occurs when students progress through challenges or "crises" created by their environment (Chickering & Reisser, 1993). Chickering specifically chose the word "vectors" because students' developmental experiences "have direction and can show where they are headed" (Chickering & Reisser, 1993, p. 35). The seven developmental vectors of this theory were listed as:

1. Developing competence
2. Managing emotions
3. Moving through autonomy toward interdependence
4. Developing mature interpersonal relationships
5. Establishing identity
6. Developing purpose
7. Developing integrity

Chickering and Reiser divided these vectors into two groups. Building the foundation of a student's identity is associated with vectors one to four (Chickering & Reisser, 1993). Vectors five to seven represent the reinforcement of one's identity and way of being.

College student development and the process of individualization occur through the act of progressing through these seven vectors or types of experiences (Chickering & Reisser, 1993). I selected the Seven Vectors as a theoretical framework because it provides a "broad conceptual approach" for how college student development occurs (Chickering & Reisser, 1993, p. 44). These vectors provide categories for student development goals, helping to better understand how CMB participation impacts student development.

A secondary framework I used in this study is the Theory of Involvement, developed by Astin (1984) and considered a college impact model by Strayhorn (2013). Astin (1991, 1993, 1997) theorized that the more time and physical energy students put into experiences in college, the more rewards they will gain. Charles Pace, who engaged in research on student effort influenced Astin's theory (Pace, 1988). Astin's theory provided a simple explanation for how students change and develop while in college. His Theory of Involvement asserts the idea that "students learn by becoming involved" (Astin, 1985, p. 133). In Freudian terms, *cathexis* refers to the investment of psychological energy (Astin, 1999). Astin also viewed time commitment as finite, thus employing the notion of "time on task" being a key factor in students' level of involvement. Astin developed the Input-Environment-Output model to explain college impact with his theory. He explained about this model that in order to measure the impact of college, researchers must have input factors such as high school and pre-college data, environmental factors while in college such as types of involvement and activity that individuals invest energy in, and the impact of input and environment on student development (Astin, 1991). Input and Environment serve as independent variables while

Output is the dependent variable or outcome. In this study, CMB participation functions as the "environment" of Astin's Input-Environment-Output model. Astin's theory implies that CMB participation will positively affect most areas of a student's development, especially as the amount of involvement and leadership increase. However, the perceived value of those experiences could be dependent on a student's role or level of participation in their CMB.

I utilized Astin's theory as a secondary framework because it proposes that the experience of college marching band participation, with the input of physical and psychological energy, will significantly contribute to student development. However, this theory alone did not provide enough guidance to predict the importance of individual experiences as developmental goals. The use of Chickering's Seven Vectors provided more clarity on both student development and identity development than Astin's theory, but also has its own shortcomings.

Chickering's theory is criticized by some researchers for failing to account for diversity due to its focus on primarily white, middle-class male students (Evans et al., 2010; Pope, 1998, 2000; Reisser, 1995; Torres et al., 2009). Torres et al. (2009) expressed that "the change in diversity of population forced new emergent identity theories" since the inception of Chickering's work (p. 579). Additionally, Chickering's theory loosely defines the Seven Vectors, leaving ambiguity in its ability to classify experiences under certain vectors. Evans et al. (2010) stated that the theory "lacks specificity and precision" and "definitions of the vectors are often quite general" (p. 80). Another concern with utilizing the Seven Vectors theory is its relationship to long-term

longitudinal studies. Research on the Seven Vectors tends to utilize longitudinal design methods because of their ability to measure student change over time (Foubert & Grainger, 2006). I did not undertake a longitudinal study because I did not seek to compare student change over time. I opted for a one-time administered survey because my research questions focused on student perceptions at their current role or level. Additionally, I did not utilize a pre-test and post-test due to the difficulty of guaranteeing consistency in the sample population with a broad distribution. To answer the questions of this study I used demographic information to account for how the individual background of students affected their responses. Chickering's Seven Vectors, having been repeatedly tested, were a feasible starting point for categorizing development goals, predicting results and interpreting those findings.

CHAPTER 2: LITERATURE REVIEW

There has been extensive research on the topics of college marching bands, extracurricular activities and their effect on students, college student development, psychosocial development, student leadership, gender in music, teacher preparedness, band recruitment and retention, and many more. Even with this vast array of literature, finding a study that has brought CMB participation and student development together into one study has proved difficult. For this reason, I have divided this review into four areas that can be associated with either the CMB or student development: 1) The College Marching Band and Band Music Participation, 2) Extracurricular and Co-curricular Activity Impact on College Student Development, 3) Student Development and College Impact, and 4) Leadership and Gender. Dividing the research into these four topic areas helps to organize this review of literature around the research question topics and allows for predictions of possible outcomes.

The College Marching Band and Band Music Participation

Even with the vast amount of research on band topics, there is a lack of research that explores the role of CMB participation in student development, with the exception of Healy's (2016) study on CMB student engagement. Using the National Survey of Student Engagement (NSSE) to compare the scores of CMB students to non-CMB students, Healy (2016) explored the effects of CMB participation on student engagement and learning (National Survey for Student Engagement, 2001). This study featured a large sample population of CMB students (N = 1,882) from 20 college marching bands in the United States and compared the responses of non-CMB students (N = 6,095) from the

same universities. Healy's (2016) was limited in that the sample population was comprised mostly of Fourth-Year students and few First-Year students. The areas of development analyzed were: engagement with diversity, higher-order learning, reflective learning, and personal social responsibility (Healy, 2016). Findings suggested that CMB students display stronger scores in most areas of learning and engagement compared to their non-CMB peers, especially in: "diversity, reflective learning, and personal social responsibility" (Healy, 2016). However, CMB students also showed lower levels of student engagement in the classroom compared to non-CMB students.

Healy's (2016) did not use Chickering's Seven Vectors for his study, but some natural alignment exists with some of Chickering's vectors: Engagement with Diversity aligns with the vector *Mature Relationships*, Higher-Order and Reflective Learning with *Developing Competence*, and Personal Social Responsibility with *Developing Integrity* and possibly *Developing Purpose*. Because the findings suggested that CMB students score higher in these areas, I expect that these vectors, or goals within them, will receive a higher rating by CMB students.

Studies about factors or reasons for participation in CMB lend insight into psychosocial development because they can tell us which aspects students most value about participation. Moder (2013) reported that "social aspects involved with collegiate band" ranked fourth out of 12 reasons for students wanting to participate in a CMB (p. 69). Earlier research on participation factors (Mountford, 1977) found that students' primarily made their decision to participate in college marching band while in high school and that recruiting tactics by college bands were less important factors. Mountford

(1977) also noted that social aspects of CMB do play a role in the decision to participate. Similarly, McClarty (1968) determined that the enjoyment of both musical and social activities was the lead reason for students' decision to participate in a CMB. The social aspect of CMB is a common theme mentioned consistently in factors leading to participation, and is supported by several studies, both past and recent (Clothier, 1967; Faber, 2010; Mantie & Dorfman, 2014; McDavid, 1999; Tedford, 2014). Based on these findings, it seems likely that the social aspect of CMB participation fosters student development and that students will report positive perceptions of the vectors and goals relating to the social aspect of CMB participation.

Holding a leadership position can impact students because the experience of being a leader provides valuable opportunities for psychosocial development. Warfield (2013) investigated perceptions of CMB leaders and used the Student Leadership Practices Inventory as the primary instrument to identify the practices of exceptional student leaders. Warfield (2013) notes "student leaders in marching band perceived themselves as more effective leaders than did their student followers" (p. 102). This provides support for the hypothesis that leaders will report higher scores than non-leaders on the perception of CMBs impact on development. Additionally, this study explored other topics including how student leaders act, the importance of leadership experiences, and interactions with psychosocial development.

Cumberledge (2015) investigated time management of CMB students to discover how CMB versus non-CMB students use their time outside of class. Results suggest that CMB students have "adequate study time, even with the sizeable amount of weekly

rehearsals and weekend performances" (Cumberledge, 2015, p. viii). Additionally, non-CMB students spend their free time engaged in more social and leisure activities compared to CMB members who use their free time more effectively (Cumberledge, 2015). Time management falls under the vectors *Developing Competence* and possibly *Autonomy*. Based on this study, it is possible that students will rate the goal of time management and these vectors as favorably impacted by CMB participation.

Ammann (1989), Richards (2012), and Williamson (2009) all studied how CMB participation affected teacher preparedness. Richards (2012) reported that music teachers felt their "ability to work towards a goal" was the highest reported skill developed through CMB participation compared to "proficiency on a secondary instrument" as the least important (p. 52). Social aspects such as "opportunity to have an enjoyable experience" and "sense of belonging" were also reported as the most important benefits (Richards, 2012, p. 59). Similarly, Williamson (2009) reported that participation in CMB was essential to developing rehearsal skills compared to learning rehearsal skills through academic coursework. These results suggest that vectors *Developing Competence, Developing Purpose,* and *Mature Relationships* might be perceived as highly affected by CMB participation. The goals referenced by Richards (2012) and Williamson (2009) fall under these vectors. Given that "proficiency on a secondary instrument" was reported least important, this suggests that goals related to *Developing Competence* may receive lower ratings.

Young (2001) investigated persistence and continuation in the CMB to determine why non-music majors persist and return to CMB each year. Students reported that being

student leaders, preferring social aspects of band, and loving the fun of it as their top reasons for persistence in CMB (Young, 2001). They also reported that the longer they persisted in CMB, the less likely they were to participate in other organizations indicating that older students may engage in fewer activities outside of band compared to younger students (Young, 2001). Additionally, CMB students experience Chickering's vectors, *Mature Relationships*, *Establishing Identity*, and *Developing Purpose,* on a regular basis and positively influence persistence in a CMB (Young, 2001). This potentially affects how CMB members with different levels of extracurricular involvement outside of band report the importance of goals and vectors.

Research on gender and its role in band participation provided insight about how men versus women report their development. McKeage (2004) explored the role of gender in college jazz ensembles, finding that women greatly differ with men in their reasoning for discontinuing participation. Cumberledge (2018) researched how musicians, their performance, and the instrument played are perceived and stereotyped based on gender. Instruments played mostly by women received feminine descriptors, while instruments mostly played by men received masculine descriptors. While neither of these studies focused specifically on gender roles in the CMB they do highlight the differences that exist with gender roles in similar music ensembles.

Extracurricular and Co-curricular Activity Impact on College Student Development

Extracurricular activities often provide the type of out-of-class experience that student development researchers highlight when explaining college impact and student development (Astin, 1997; Chickering & Reisser 1993; Pascarella & Terenzini, 2005).

According to Kuh (1991), “it is estimated that more than 70 percent of what a student learns during college results from out-of-class experiences” (p. 8). If this assertion is true, the importance of reviewing research on how extracurricular involvement has impacted college student development is justified. Research on the role that extracurricular participation has on college student development can provide insight about how students may perceive CMB participation’s role in their own development.

The terms extracurricular and co-curricular, as out-of-class learning experiences in higher education, need to be defined because the two terms are sometimes used interchangeably despite having separate meanings. Referring to the Glossary of Education Reform, the word “extra” is generally meant to define school or college activities that were not connected to classroom curriculum (Abbott, 2014). The word “co” indicates that the school activity is in some way connected to classroom curriculum and serves to enhance classroom learning (Abbott, 2014). “Athletics, for example, are typically considered to be extracurricular activities, while a science fair would more likely be considered a co-curricular activity, given that students are learning science” (Abbott, 2014, para.4). Based on this interpretation, there is ambiguity as to how to classify the CMB. CMB members often receive course credit because marching band is an academic class at many colleges and universities. This is not the case for all extracurricular activities, especially athletics. To create specificity in this study, the term “extracurricular” seemed most appropriate to define CMB participation. The learning that takes place in CMB does not directly mimic a typical classroom curriculum, except for its application to students majoring in music or music education. Given that most college

marching bands have only a small number of music majors, the term extracurricular seems more appropriate than co-curricular (Moder, 2013; Warfield, 2013).

To measure the role of extracurricular activities in student development, researchers have developed several often-used survey instruments. One of the most frequently used instruments is the Student Developmental Task and Lifestyle Inventory, created by Winston, Miller, and Prince (1979), and is the second version of this instrument (Cooper et al., 1994; Foubert & Grainger, 2006; Martin, 2000; Winston, 1990). Also popular is the Iowa Student Development Instrument (Elliott, 2009; Hood, 1984; Hood & Mines, 1986). Winston (1990) asserts that the SDTLI and the ISDI were developed to measure psychosocial development in college age students with respect to Chickering's Seven Vectors theory. These instruments do not measure all vectors, but do focus on three: *Developing Purpose*, *Mature Relationships*, and *Autonomy* (Winston, 1990). Studies using these survey instruments have shown positive correlation between increased involvement in extracurricular activities and higher development within these vectors (Cooper et al, 1994; Foubert & Grainger, 2006; Elliott, 2009). Similar results were reported when these survey instruments were used: the National Survey of Student Engagement (Healy, 2016), Activity Involvement Survey (Wilson, 1999), and the College Student Experiences Survey (Abrahamowicz, 1985, 1988). Regardless of the survey instrument utilized, the notion that student development is fostered through involvement in extracurricular activities is supported by previous research.

Elliott (2009) utilized the Iowa Student Development Instrument (Hood & Jackson, 1985) to determine the relationship of co-curricular involvement to student

success and development. The findings suggested that more involved students reported higher grade point average and satisfaction with college. Additionally, increased involvement corresponded to higher levels of growth in the vectors *Developing Purpose, Managing Emotions,* and *Autonomy.* Stanford (1990, 1992) confirms similar results to Elliott (2009) using the SDTLI to determine the relationship between extracurricular involvement and development among student leaders. While all three vectors reported higher level of growth, the vector *Developing Purpose* reported the highest level of improvement (Stanford, 1990, 1992). It should be noted that the vector *Managing Emotions* is used for the ISDI while *Mature Relationships* is measured for the SDLTI.

Foubert et al. (2005) sought to validate the SDTLI survey instrument and determine its shortcomings. The results provided partial support for the Seven Vectors theory and suggest a reexamination of the theory's relationship to socioeconomic class, gender, race, and vector order (Foubert et al., 2005). Similar to other studies, students showed positive development gains in the three vectors the SDTLI is designed to probe. However, results showed that *Developing Purpose* was not necessarily achieved near the end of students' college career or at the end of the progression through the vectors as prescribed by Chickering and Reisser (Foubert et al., 2005). Additionally, women showed a higher level of development in the vector *Mature Relationships* throughout their college career compared to men (Foubert et al., 2005). This opens the possibility that *Developing Purpose,* and possibly other vectors, report favorable scores regardless of class year. Additionally, men and women show differences in how they move through certain vectors, suggesting that women would report CMB participation as more

important to development than men (Foubert et al., 2005; Zacherman & Foubert, 2014).

Anaya (1996) contradicted the notion that all extracurricular activity boosts cognitive achievement. Utilizing GRE scores, it was determined that "involvement in student clubs and organizations was negatively associated with verbal skill development" (Anaya, 1996, p. 618). Anaya suggests that nonacademic activities take time away from academic activities that develop these skills. Cognitive achievement is different from psychosocial development, so its relevance to this study may be limited, but is highlights the possibility of negative effects caused by some types of extracurricular involvement.

The type and amount of time spent participating in extracurricular activities can also affect student development. Zacherman and Foubert (2014) studied the relationship of co-curricular engagement to academic performance. They found that the academic returns are curvilinear, with diminishing returns when more than 10 hours per week are spent on co-curricular activities (Zacherman et al., 2014). Pascarella and Terenzini (2005) support this notion suggesting that holding a campus job has diminishing returns after 15 hours per week. Of course, the type of activity also matters. Eccles and Barber (1999) note that performing arts involvement in schools correlates with positive development and minimal risky behavior compared to other types of activities, supported by several studies (Astin, 1997; Chickering & Reisser, 1993; Cumberledge, 2015; Elkins, Forrester & Noel-Elkins, 2011; Pascarella & Terenzini, 2005; Terenzini, 1995; Williams & Winston, 1985). In contrast, risky behavior that fosters negative development, like drinking, can sometimes be associated with athletic teams or organizations with a large social component (Eccles & Barber, 1999). Hood (1984) confirmed that extracurricular

activities supported by college unions promoted the most psychosocial growth. Additionally, seniors showed the most growth in sexual identity and confidence due to extracurricular involvement, but cognitive development showed no measurable growth (Hood, 1984).

A vast majority of studies support the notion that extracurricular involvement fosters positive contributions to psychosocial development and achievement (Abrahamowicz, 1988; Anaya, 1996; Cooper et al., 1994; Foubert & Grainger 2006; Gellin, 2003; Kuh, 1999; Kuh, 2005; Magolda, 1992; Martin, 2000; Schuh & Laverty, 1983; Stanford, 1990; Elliott, 2009; Wilson, 1999). The differing focuses of these studies each provide a piece of the puzzle that creates a picture of how extracurricular experiences promote student development. Some of these studies utilize a broad definition of what constitutes an extracurricular activity, but the results are still mostly applicable to CMB participation. While some vectors and goals will be reported more favorably than others, goals involving social experiences and community are expected to strongly resonate with CMB students.

Student Development and College Impact Research

Student Development research "explores the ways in which students develop identity, maturity, and ways of thinking" (Strayhorn, 2013, p. 2). This research can be divided into psychosocial based theories and cognitive-structural theories (Pascarella & Terenzini, 2005; Strayhorn, 2013). Psychosocial theories serve to study and explain how people "define themselves, their relationships with others, and what to do with their lives" as affected by environment (Evans et al., 2010, p. 42). Comparatively, cognitive-

structural theories "focus on how people think, reason, and make meaning of their experiences" (Evans et al., 2010, p. 43).

Freud (1921) and Erickson (1958, 1968) contributed some of the early work in the area of psychosocial development by utilizing the concept that humans develop in stages and move through those stages by learning from environmental experiences. Based on their work, Chickering (1969) developed the Seven Vectors theory of college student identity development. Chickering & Reisser (1993) updated this theory to reflect student perceptions of how the vectors function. The updated seven vectors are: developing confidence, managing emotions, moving through autonomy toward interdependence, developing mature interpersonal relationships, establishing identity, developing purpose, and developing integrity. These vectors function as experiences or "crises" faced by college students that can impact future decision-making values (Erickson, 1968; Pascarella & Terenzini, 2005, p. 20). With the Seven Vectors, Chickering changes the scope of Erikson's (1968) stages of adolescent identity development in order to apply them to college student development. On the importance of his work, Pascarella and Terenzini (2005) declared: "no psychosocial theorist has had more influence on the research on college student development or administrative efforts to promote it than Arthur Chickering" (pp. 20–21). This is also supported by Long (2012), who describes Chickering's vectors as "one of the most widely applied theories of student development" (p. 43).

Chickering used both surveys and interviews with small participant pools to explore the seven vectors (Chickering & Reisser, 1993; Pope, 1998; Schuh, 1994).

Student development researchers have measured and studied Chickering's theory by using survey instruments like the Student Developmental Life Task Inventory and the Iowa Student Development Instrument. Researchers often administered these surveys longitudinally and queried students' perceptions of their development in relation to the vectors probed by these instruments (Winston, 1990). The strength of longitudinal studies is their ability to compare development over time, but they do require several years to administer (Martin, 2000). With a longitudinal study, students are usually surveyed as first year students and then again in their final year to measure developmental change and the beginning and end of their college experience (Foubert & Grainger, 2006; Winston, 1990).

As a result of this psychosocial development research, Chickering made recommendations to colleges and universities to improve undergraduate education. Chickering and Gamson (1987) published their "Seven Principles for Good Practice in Undergraduate Education" establishing that a good undergraduate education does the following (p. 2):

1. Encourages contact between students and faculty
2. Develops reciprocity and cooperation among students
3. Uses active learning techniques
4. Gives prompt feedback
5. Emphasizes time on task
6. Communicates high expectations
7. Respects diverse talents and ways of learning

Cruce, Wolniak, Seifert, and Pascarella (2006) researched the impact of these Seven Principles and found positive results, especially in the area of learning orientations, and acknowledged that these practices compensate for student deficiencies connected to pre-college background.

Following this publication, Chickering and Reisser (1993) recommended guidelines that assert "an institution becomes a learning organization when it does the following" (pp. 479–481):

1. Clearly defines values, mission, and vision
2. Emphasizes an ethic of quality
3. Makes people the prime resource
4. Learn from the people it serves
5. Emphasizes autonomy and entrepreneurship
6. Orients toward sustained action
7. Analyzes strengths and weaknesses
8. Invests in professional development

All of these recommendations are applicable to the college marching band ensemble as a microsystem or subculture of an institution. These guidelines offer ideas for modifying current organizational practices to better support engaged learning.

College impact theories, along with psychosocial theories, serve to explain the "net effect of college on students" (Strayhorn, 2013). One of the simplest theories explaining the relationship between involvement in college and college impact is Astin's Theory of Student Involvement (Astin, 1999). It features the Input-Environment-Output

model explaining that increased involvement in the college environment positively and proportionally affects output. Astin's guiding principle is that involvement in the college environment, combined with the skills and knowledge that students bring, affects the end result of college. His research supports the idea that the greater the involvement, the more positive the outcome (Astin, 1993, 1997, 1999, 2012).

Pascarella and Terenzini (1991, 2005) were critical of Astin's Theory of Student Involvement on the notion that it is not actually a theory, and prefer to define it as a principle. They support this notion by citing Kerlinger's (1986) definition of a theory as "a set of interrelated constructs...that present a systematic view of phenomena...with the purpose of explaining and predicting the phenomena" (p, 9). Of course, Astin (1999) developed this theory so that researchers could avoid becoming entrenched in complex theoretical relationships to arrive at conclusions about college student involvement. Conversely, while Pascarella and Terenzini (2005) criticize Astin's theory, they also acknowledge its historical usefulness, explaining that many have used it effectively in research for its ability to provide a way of understanding college impact.

College retention and dropouts are another area of college impact that has been explored extensively (Astin, 1997; Pace, 1979, 1990; Tinto, 2012). Researchers have sought to determine what factors lead some students toward success and others to failure, especially first generation and minority college students. Both Astin (1999) and Pace (1979) found that student time is finite and a high level of involvement was crucial to the successful completion of college. This set the foundation for others to follow with their own versions of the Input-Environment-Output model (Strayhorn, 2013; Terenzini et al.,

1996).

In his book, *Four Critical Years*, Astin (1977) laid the groundwork for his theory of involvement while attempting to improve the scope of college impact research through the use of multi-institutional and longitudinal data. His revision of this work, *Four Critical Years Revisited,* attempts to refine his original work to account for contemporary students (Astin, 1997). One of his major concerns was the ability of researchers to determine if measured student change is a result of attending college or if there are other influences independent of college attendance. Astin (1997) believed that being able to differentiate the two strengthens the validity of college impact research. He also strengthened college impact research through his use and explanation of longitudinal assessments (Astin, 1988, 1991).

Subsequently, student engagement is a concept derived from Astin's Theory of Student Involvement. In several contributions, Kuh (1988, 1991, 1994, 2005, 2015) discusses the importance of engaged learning in the college environment to create academic success, similar to the principles derived by Astin (1991). Kuh et al. (1991) conclude that appropriate out-of-class experiences strengthen academic performance, leading to greater learning outcomes, sense of community, and better student satisfaction with their college experience. *Involving Colleges* (Kuh et al., 1991) explored the out-of-class practices of 14 successful but different colleges as a blueprint for other colleges to assess their own out-of-class experiences. This text featured 14 successful institutions with different traits to demonstrate how other colleges of similar backgrounds can work to enhance student engagement on their own campuses.

Both psychosocial development and college impact theories have inspired research in several directions. Astin et al. (2011) explored the impact of parental influences on first-generation college students, uncovering the issues that successful first-generation students face in lack of knowledge and understanding on how college works. Koch (2008) similarly studied the reasons first-generation college students left after one year. Astin et al. (2011) found that his subjects were engaged in extracurricular activities while Koch's (2008) were not involved. Pascarella et al. (2004) support these findings, expressing that "first-generation students derive greater benefits from extracurricular participation, but they were also less likely to engage in them" (p. 278).

Along with research focused on the role of out-of-class involvement creating engaged learning, researchers have studied the concept of creating learning communities to improve engaged learning (Kuh, 1995; Pike & Kuh, 2011; Roark, 2013). Concerning the importance of student communities, Chickering and Reisser (1993) suggest, "a student's most important teacher is often another student" (p. 393). Goodrich (2021) found that peer mentoring in music class helped students to elevate their individual level of musicianship and create a meaningful learning experience. Pike and Kuh (2011) reported that learning communities enhance student engagement with positive results. The CMB contains naturally occurring music learning communities, often based around an instrumental section, whose leaders are often tasked with teaching fellow band members how to improve their playing and marching (Warfield, 2013). When students engage in teaching each other, they reinforce the teaching of the director or teacher (Goodrich, 2021). Additionally, CMB participation can create academic learning

communities within itself as students of similar majors and coursework may study together because of their CMB connection. Terenzini (1995) supports this notion reporting that involvement in music activities has shown some of the strongest gains in learning.

Leadership and Gender

Developing leaders is an important goal for institutions of higher learning (Campbell et al., 2012; Cress et al., 2001; Ricketts et al., 2008). Research shows that holding a leadership position in college can have tremendous psychosocial development benefits, especially with self-reported student development (Cooper et al., 1989; Schuh & Laverty, 1983; Stanford, 1990; Warfield 1993; Wilson, 1999). Striffolino and Saunders (1989) suggest that leadership roles should be provided early, especially to first year students. They report, "empowering freshmen to assume leadership roles encourages them to become intensely involved in their college experience" (Striffolino & Saunders, 1989, p. 52). Beyond psychosocial development, Skeat (2000) studied cognitive development in student leaders, reporting that leaders had significantly higher cognitive development compared to non-leaders. This array of research predicts that leaders will report higher levels of CMB impact on the 29 surveyed development goals.

Participation in a CMB can provide several opportunities to hold leadership positions due to the typically large size of the organization. Even with the recommendations of Striffolino and Saunders (1989) to offer leadership positions to first-year students, they tend to be held by older members and who report a sense of ownership in the group's success (Warfield, 2013). I presume that due to this sense of

ownership and commitment, leaders will report higher reported scores than non-leaders for most of the development goals and vectors of this study.

Schuh and Laverty (1983) surveyed former student leaders about the perceived impact that holding a leadership position has on student development. Leaders returned higher scores than non-leaders, especially in areas that are associated with leadership skills. They also found that scores were similar across institutions despite different institutional characteristics. Cooper et al. (1994) provided support using the SDTLI in a longitudinal study to probe how student development relates to leadership involvement. Leaders reported higher development scores than non-leaders, with the greatest improvement during their third year of college. Development scores consistently increased as students advanced to the next grade level. Wilson (1999) also reported that leaders were more satisfied with college than non-leaders and experienced more skill development.

Additionally, Cress et al. (2001), support the claims that students achieve development gains through holding leadership positions. Utilizing their own set of 14 outcomes that include the development of "skills, values, and cognitive understanding," the results showed that leadership opportunities increase the development of leadership understanding and commitment, sense of civic responsibility, influencing social values, and helping others (Cress et al., 2001, p. 17). Leadership opportunities improved students' "decision making skills, ability to deal with complexity, and willingness to take risks" (Cress et al., 2001, p. 22). Warfield (2013) also supports this notion of positive skill development through leadership positions, specifically through CMB participation.

He reported that student leaders who learn and utilize the leadership practice called "model the way" are reported as the most successful (Warfield, 2013, p. 103). However, student leaders also tend to report their leadership skills much better than their followers do (Warfield, 2013).

Stanford (1990) reported similar findings with some variation. Utilizing the SDTLI, leaders showed growth in the vectors of *Developing Purpose* and *Mature Relationships*, but scored lower on *Autonomy*. Foubert and Grainger (2006), also using the SDTLI, found *Mature Relationships* returned lower scores, and that leaders and non-leaders reported similar scores. The exception was sophomore leaders who reported higher scores than non-leaders (Foubert & Grainger, 2006).

Extant research on leadership implies that holding leadership positions correlates with positive growth in several areas including psychosocial development. The studies that show conflicting results on this assumption provide some understanding about which areas of development leaders report higher than non-leaders. For example, leaders may report lower scores for the vectors *Autonomy* and *Mature Relationships*, but will likely report higher scores on *Developing Purpose*. Any surveyed development goals that are associated with leadership positions are likely to be rated higher by leaders, in the same manner that vectors associated with leadership positions were rated higher.

In addition to holding a leadership position, gender can also affect a student's view of their student development and has been analyzed for its effect on development, involvement, and academic performance (Pascarella & Terenzini, 2005). Gender also has bearing on the theoretical framework used in this study. For example, a criticism of

Chickering's research and his Theory of Seven Vectors is that it focused on primarily male students of white, middle-class backgrounds (Evans et al., 2010; Pope, 1998). To address this concern, subsequent studies have expanded their focus to evaluate the relationship of gender to the Seven Vectors theory.

Foubert et al. (2005) studied the results of the SDTLI in relationship to the Seven Vectors theory and determined that gender differences emerged implicating the need to refine the theory. Specifically, women progress through the vectors in different orders than men and with different levels of intensity (Foubert et al., 2005). For example, women often develop *Mature Relationships* before *Autonomy* because they tend to choose to preserve relationships over achieving objectives (Josselson, 1987). In contrast, men proceed through *Autonomy* earlier than women by placing more importance on individualism than intimacy when trying to achieve goals (Chickering & Reisser, 1993). In the vector *Mature Relationships*, Foubert et al. (2005) found that "women are more developmentally advanced than men through their college experience" (p. 468). Additionally, women are earning degrees in higher number than men now. According to Ewert (2012), "since the early 1980's, colleges and universities have awarded the majority of bachelor's degrees to women" (p. 824)

Zacherman and Foubert (2014) also contribute to the question of gender by confirming that women perform better academically than men. In studying the optimum number of hours per week for the best academic returns, they discovered that men with more than 10 hours a week of co-curricular activities show returns that are similar to participating in no activities. In comparison, women's academic achievement improved

with some activities and was worst with no activities, suggesting that women have a greater need for co-curricular activities in conjunction with academic classes (Zacherman & Foubert, 2014). While these two studies show women reporting higher scores, Wilson (1999) found that men reported a higher level of involvement intensity and perceived a higher level of change from extracurricular involvement. As previously mentioned, Wilson (1999) sought to determine the impact of activity involvement in relation to different demographic characteristics.

McKeage (2004) and Cumberledge (2018) examined gender issues in music performance. Their research did not provide insight into whether gender affects development, but they did highlight the bias that exists in music with regards to gender in music performance. Also, McKeage (2004) reported that women have a harder time with persistence in jazz performance. Contrarily, Cumberledge (2018) reported that there was no bias in the evaluation of the musical performance of male and female students, perhaps indicating that some change is occurring with regard to gender stereotyping in music ensembles. However, Abeles (2009) showed little difference in gender stereotypes applied to musical instruments from 1978 to 2007. Furthermore, Cumberledge (2018) found that gender stereotypes were still present with regards to how bandleaders and group members perceived instrumentalists.

Harris and Lester (2009) provide an assessment of how female and male identity issues differ in higher education. Women tend to be more successful than men at following through and finishing degrees, but the "pressure to maintain femininity causes identity conflicts that are not evident in student outcome statistics" (Harris & Lester,

2009, p. 101). The resulting stress from these pressures can manifest themselves in eating disorders and psychological stress. Women also suffer from academic segregation into "traditionally feminine academic disciplines," and suggest that women in traditionally male-dominated disciplines are forced to conform to "masculine ways of learning" (Harris & Lester, 2009, pp. 100–101). If we apply these notions to CMB participation, gender bias exists within stereotypically male and female instrument groups because some instrumental sections are dominated by women and others by men (Cumberledge, 2018). These notions also acknowledge the persistence of women and their ability to finish tasks while progressing through identity development.

In identifying the stress and difficulties that women face within a CMB, female band directors provide a significant example. Gould (2003) suggests that "as college band directors, women are the wrong gender" (p. 8). This statement was intended to highlight that female CMB directors reported feeling like just colleagues to their male counterparts as opposed to "welcome as part of the group" (Grant, 2000, p. 105). Gould claims that it is "the cultural systems of music, performance, and college band," that explain the difficulties and segregation that women face as CMB directors (Gould, 2003, p. 9). McKeage (2004) supports this notion of cultural and music problems contributing to gender bias in music ensembles by reporting that bias does exist within jazz groups and women have a harder time with persistence. Although Gould's (2003) findings were more specific to band directors, it seems likely that the culture of the college marching bands and music that cause these biases might be similar for female band members, thus affecting how their perceptions of development through CMB participation.

In contrast, men face a different set of identity issues in college. Men are expected to conform to masculine expectations to "suppress their emotions, excel at sports, and pursue sexual relationships with women" (Harris & Lester, 2009, p. 101). Identity crises within men tend to manifest unhealthy behavior trends such as "alcohol and substance abuse, poor help-seeking and coping strategies, depression, violence and aggression, homophobia, and misbehavior" (Harris & Lester, 2009, p. 101). This trend toward suppression of emotions and typically masculine behavior could negatively affect male perceptions of how CMB participation influences psychosocial identity development. Additionally, (Harris & Lester, 2009) assert that men are not as engaged in academics and socially minded activities as women. Men tend to be more concerned with "earning money, gaining recognition, and having authority over others" (Harris & Lester, 2009, p. 103).

When applying these reported differences in identity development of men and women, it appears that women will probably rate CMB influence on their psychosocial development higher than men, especially in these areas of social interaction: creating belonging, desire to help others, engaging in community service, ability to work as a team, empathizing with others, handling frustrating situations, and social tolerance. These fall under the vectors *Developing Purpose, Managing Emotions,* and *Mature Relationships*. Men will probably report areas of leadership and skill development higher than women, under vectors such as *Autonomy, Developing Competence,* and *Establishing Identity.* It is somewhat difficult to predict outcomes with any certainty because gender norms for higher education students are constantly changing and evolving to cultural

influences. What is certain is that differences do exist in how men and women experience identity development.

Summary

This chapter has reviewed previous literature in four research areas associated with college student development through CMB participation: the college marching band and music participation, the impact of extracurricular activities on student development, student development and college impact research in general, and the role of gender and leadership in college student development.

Research on the college marching band and band music participation has shown that CMB students report more development than non-CMB students (Healy, 2016), that the social aspect of CMB is the primary reason for participation (Moder, 2013; Mountford, 1977), that being a leader increases view of CMBs importance (Warfield, 2013), that teamwork opportunities are viewed with more importance than skill development (Amman, 1989; Richards, 2012), and that *Developing Purpose* and *Establishing Identity* are experienced on a regular basis in CMB participation (Young, 2001).

Students report positive development gains when they are more involved in extracurricular activities, especially when holding a leadership position (Elliott 2009; Stanford, 1990, 1992). However, some researchers have generated negative development results associated with extracurricular activities (Anaya, 1996). Factors like the type and amount of time spent on an extracurricular activity can affect the quality of student development results (Zacherman & Foubert, 2014). Involvement in activities is

important, but students report diminished development when too much time is spent on extracurricular activities, indicating that students with a small number of extracurricular activities outside of marching band may report their development more positively than those with too few or too many activities (Zacherman et al., 2014). Most research supports the notion that modest involvement in extracurricular activities benefits student development.

Student Development and College Impact research provides a framework for understanding and predicting how CMB students perceive development and rate goals. Similar to findings on extracurricular activities, greater involvement in college correlates positively with strong identity development (Astin, 1999; Chickering & Reisser, 1993; Strayhorn, 2013; Terenzini et al., 1996). However, factors outside of attending college may be contributing to these results in ways that we can't account for in research (Astin, 1997). Nevertheless, this research provides applicable data to help predict the most and least important aspects of CMB participation to student development. It also shows that participation in music activities correlate with the strongest gains in college learning (Pascarella & Terenzini, 1991).

Research shows a strong correlation between holding a leadership position and greater student development results. Leaders find more ownership in organizations and are more satisfied with their college experience due to a higher level of engagement. However, the vectors *Autonomy* and *Mature Relationships* tend to be experienced less by leaders, possibly creating some difficulty for leaders to pass through these particular vectors.

Research on gender highlights the differences between how women and men develop in college, particularly how women are more social and seek to preserve relationships compared to men. It also highlights the gender bias that has existed in band programs on instrument choice and the different ways that men and women are expected to behave. This bias has also made it difficult for women to feel welcome as CMB directors, a profession dominated by men. This research indicates that we should expect women to report higher scores than men on most development goals, but particularly in those that involve a social aspect, teamwork, and building relationships.

In looking at these four areas, we can find indicators of how CMB students will perceive the importance of student development goals. Because there has been almost no research to date that has evaluated this relationship, this previous research on similar and related topics is the only guidance available to offer some indication of what students will find important. It is the goal of this study to focus on the relationship of CMBs to student development and discover new information that can help fill the research gap in this area while providing new ideas for future study.

CHAPTER 3: METHODOLOGY

Method

The purpose of this study was to explore the perceived importance of CMB participation to the student development of CMB students in the United States. I utilized a non-experimental quantitative approach in order to describe how the phenomenon, CMB participation, fosters student development. Perceptions of CMB students were obtained using a self-administered survey designed for participants to rate CMB participation's influence on their student development using a four-point Likert scale. Participants were also asked to provide relevant demographic information. Using a survey as my data collection instrument enabled efficient access to a large sample population of CMB students with a large variety of differing backgrounds and band experiences. The survey was created and administered electronically through Qualtrics.

My choice of method was based on the non-experimental descriptive method utilized by Moder (2013) and intended to provide a different perspective from the comparative study by Healy (2016). I was able to report student perceptions and answer the research questions by using a non-experimental approach. In comparison, Healy (2016) used an experimental approach to compare CMB to non-CMB students and reported that CMB students showed higher levels of student engagement than their counterparts. Experimental quantitative methods, like the one used by Healy (2016), are useful for situations where researchers are trying to determine an outcome based on changing the independent variables (Phelps et al., 2005). One limitation of Healy's (2016) study was the inability to show whether CMB participation was the catalyst that

caused students to show higher levels of engagement. Student development researchers have shown concern for the inability to demonstrate that participation is the catalyst for an outcome (Astin, 1997). This is because when researchers use a standard survey for a large sample population and compare the responses of two groups from within that sample, you cannot determine if the demographic group they are placed in caused them to answer differently. Asking participants to respond without knowledge of the group being compared, many other factors could have caused a difference in participant responses. A non-experimental design removed the need to show causality and allowed me to report perceptions on the role of CMB participation while using a data collection instrument that is specific to the experience.

A descriptive approach was also useful because it allowed me to focus only on CMB students and ask survey questions relevant to their band experience. In comparison, Healy (2016) used a standard survey, the National Survey of Student Engagement, with survey questions that were applicable to the experiences of all college students, but not specific to CMB student experiences. By creating survey questions that resonated with the CMB experience, the results provided insight that is specific to the CMB experience.

Population and Sample

The target population for this study was current CMB students in the United States. To obtain a sample from this population, I sent the survey instrument by email to current CMB directors in the United States through the College Band Directors National Association email list. I chose to use the CBDNA network for survey distribution because according to Moder (2013), who used a similar distribution method, CBDNA is one of

the most prominent professional organizations for CMB directors. It provided an effective delivery method for reaching the target population of this study. I asked CMB directors to forward the survey to their current CMB students with request for voluntary participation. Students voluntarily provided demographic information and rated the 29 development goals. I used convenience sampling because obtaining a population list of all CMB students was not possible. Convenience sampling was an efficient method for attaining a large number of responses that represent the perceptions of CMB students from a broad variety of backgrounds.

I sent the initial email containing the request for survey participants to CMB directors on the CBDNA email list, followed by a second reminder email sent two weeks. The survey was open for one month. During that time, 768 participants submitted complete responses. Participants needed to be current CMB members during the fall semester of 2018 for inclusion in this study. Graduate students who were current CMB members were also included in the sample along with undergraduate students.

Survey Instrument

To develop a survey that intersects student development goals with the experience of participating in a CMB, I brainstormed possible development goals based on my personal experience as former CMB member and a current CMB director. I also gathered possible goals from the surveys created by Warfield (2013), Wilson (1999), and from research studies by Chickering and Reisser (1993).

The survey form contained questions in two sections. The first section asked for participants to provide demographic information. The second section asked for

participants to rate the influence of CMB participation with respect to each of 29 development goals. I wrote these development goals as closed survey questions.

Demographic Information

Related studies on band participation influenced the types of demographic information queried in this survey (Mantie & Dorfman, 2014; Moder, 2013; Warfield, 2013; Wilson, 1999). These studies used common demographic categories like gender, class year, and instrument. Mantie and Dorfman (2014) also asked about race and academic major to evaluate how those factors affected music participation levels. Moder (2013) requested the name of participants' institution, size of institution, scholarship information, and musical experience level to determine what factors contributed to band participation in college. Based on these studies, I determined that common demographic categories were needed along with demographic information to describe a participant's marching band experience such as size of band, size of staff, ratio of student to staff instruction, and the number of different halftime shows their CMB performs each year. Demographic information on leadership roles and extracurricular participation was also necessary to answer the research questions. I tried to avoid asking for demographic information that could identify participants, as that could have changed the way participants respond. Anonymity, when responding to surveys, allows participants to honestly answer questions and improves cooperation because their privacy is protected (Lavarkas, 2011).

I asked for the demographic information of instrument, location by state, and major area of study to provide background of the participants. The instrument played is

often requested in band research because it allows researchers to categorize students. Cumberledge (2018) found that the instrument played could influence a musician's ensemble experience due to stereotypes and attitudes associated with certain instruments based around gender stereotypes. The rationale for asking location by state is to verify that students are not from primarily one location or band, helping to explain the diversity of the participant pool, like the method used by Moder (2013). Based on surveys by Mantie and Dorfman (2014) and Moder (2013), I asked the major area of study to gauge the academic diversity of the participant pool.

I asked several additional demographic questions because of their specific relevance to the research questions of this study. These include gender, current level in college, band leadership roles, number of extracurricular activities, number of band staff, ratio of staff to student teaching, and number of halftime shows prepared in one season.

Gender classification, as a demographic category, can impact how students view their own development because women and men tend to hold different values in how they approach college and the need for extracurricular activities (Foubert et al., 2005; Josselson, 1987; Lester & Harris, 2009; Zacherman & Foubert, 2014). Previous research has shown that women and men proceed through student development at different rates (Chickering & Reisser, 1993). Additionally, women and men face different challenges to identity development while in college, and those difficulties do exist based on gender stereotypes (Cumberledge, 2018; Harris & Lester, 2009; McKeage, 2004). For example, Josselson (1987) found that women tend to favor maintaining relationships and are more socially minded than men. Harris and Lester (2009) explain that men face challenges in

identity development that require them to act in masculine ways. Based on this research, it was important to explore how perceptions of development differ based on gender. In asking participants to report their gender, there are obviously variations in how individuals can view their gender status. For this study, participants were limited to the choices of female and male, with the option to not answer if these designations did not suit them. I expected that participant's views of their development would differ by gender.

Current level in college is a demographic question in student development research that helps to understand how both the quantity and level of experience changes perceptions (Astin, 1997). I expected that older students would have more experiences to reference when asked to rate each student development goal, but there is no presumption on how those experiences impact perceptions.

Holding a leadership position in a CMB can change how a student views their development. Development is usually increased when a leadership role is present (Cooper et al., 1989; Schuh & Laverty, 1983; Stanford, 1990; Warfield 1993; Wilson, 1999). This demographic information served to answer the research question: *"How do students who hold leadership positions in college marching band differ from those who do not in relation to perceived importance of development goals?"*

I asked participants to report their number of extracurricular activities to answer the research question: "*Do students with different numbers of extracurricular activities outside of college marching band differ in relation to perceived importance of development goals?*" Involvement in extracurricular activities has historically influenced

student development in a positive manner (Abrahamowicz, 1985; Astin, 1985; Astin, 1991; Cooper et al., 1994; Elliott, 2009; Foubert & Grainger, 2006; Foubert et al., 2005; Healy, 2016; Kuh, 1991; Wilson, 1999). Based on the previous results of these studies, it seemed important to explore how CMB participation influenced student perceptions.

I asked participants to report the number of band staff members and ratio of staff to students teaching for their potential influence on how CMB students rate developmental goals. I have found no instances where researchers had previously accounted for these variables. These demographic characteristics can affect the amount and quality of leadership opportunities available to CMB students. Bands with a larger staff may provide less opportunity for students to be involved in leadership positions, which could negatively affect student perceptions of their development through CMB experience. By querying these two pieces of demographic data, we can see a picture of how a smaller versus larger band staff affects perceptions of development through CMB participation.

To determine if a student is learning a larger number of new shows throughout a season or is focusing on perfecting a small number of shows, I participants to report the number of halftime shows prepared in one season. Preparing a different amount of shows each season can change the rehearsal style of individual bands. Preparing one or two shows often equates to a harder show with much more rehearsal time spent on precision and attention to detail. In contrast, bands that prepare several shows each year at times may sacrifice perfection of small details due to limitations on rehearsal time. Rehearsal time may be the same, but divided up over more shows become less per show. The

number of shows prepared cannot provide a definitive picture of how a marching band is rehearsed and the type of experience it yields, but it allowed us to see if there was any difference in reported perception based on this factor. A reported difference may provide a starting point to make assumptions that can inspire future research on the rehearsal style of college marching bands.

Development Goals

The second section of the survey asked students to rate development goals based on their perceived impact of CMB participation. I created a survey with goals that are specific to the CMB experience and asked participants to rate the importance of CMB participation to these goals using a four-point Likert scale with the designations: no influence, some influence, moderate influence, strong influence, and not applicable. I derived these goals and their vector classifications from three sources: Chickering and Reisser's (1993) Seven Vectors of Development, leadership skill development goals provided by Wilson (1999), and my own experience as both a CMB director and CMB student. To create these goals for this survey, I began by brainstorming the CMB experiences that I believed were important to developing students. The themes of these goals included time management, public speaking, running a meeting, goal setting, leadership, problem solving, mediating conflict, teamwork, communication, and motivation. I then cross-referenced these experiences with survey goals from Wilson (1999) and the detailed explanations of each of Chickering's Seven Vectors from *Education and Identity* (Chickering & Reisser, 1993). Next, I selected and edited 29 development goals that seemed to best reflect the convergence of student development

with CMB participation. I purposefully used a smaller number of goals, compared to previous surveys, to improve its completion rate and reduce survey fatigue.

The final list of goals was reviewed by an expert panel of three CMB directors at the University of Notre Dame and one music-education professor at the University of Georgia who had CMB experience. This panel reviewed the survey to verify its content validity and confirm that these developmental goals were relevant to both college band experiences and Chickering's seven vectors. Appendix B provides a list of the 29 goals used and categorizes them under the Chickering vector that they represent. Each vector had different number of goals categorized under them because CMB experiences align with some vectors more than others. I phrased these goals so that participants would understand their meaning without needing to have background knowledge of Chickering's Seven Vectors. After this review by colleagues, I finalized the final wording of these 29 goals used in this survey.

For participants to rate these goals, I utilized a four-point Likert scale with the designations: no influence, some influence, moderate influence, strong influence, and not applicable. For the purpose of analysis, I assigned these choices an ascending point system. No influence was assigned a one, some influence assigned a two, moderate influence assigned a three, strong influence assigned a four, and not applicable was assigned a zero to account for when participants believed a goal was not applicable to their experience. I used a four-point scale to eliminate the possibility of participants selecting the middle or neutral choice. Analysts sometimes criticize offering a neutral option because it allows participants to avoid choosing a side (Brown, 2000; Lam &

Green, 2019). Additionally, as survey fatigue occurs participants may choose the neutral option for sake of ease (Adelson & McCoach, 2010).

Pilot Study

I conducted a pilot study to verify the clarity and understanding of the survey, search for spelling and typing errors, and log the survey duration. Participants ($N = 7$) consisted of marching band students at the University of Notre Dame with a working relationship with the researcher. The pilot study participants did not participate in the actual research study because of possible bias due to a working relationship with the primary investigator. Feedback from the participants was useful in determining that the survey was not too long or cumbersome, and that the development goals were understandable and represented the intention of the researcher. The pilot study also offered an opportunity for face validity of the content because the participants approached the survey without expert knowledge about the research topic.

Demographic Data

College Marching Bands, as an out-of-class experience, have created community and provided opportunities for college student development. Participation in extracurricular activities has shown an increase student engagement with the campus environment and inspires high levels of student satisfaction with the college experience. Previous research has studied student development as a result of extracurricular participation, but it has lacked specific focus on the college marching band participation as an activity. The following demographic data and survey results provide a descriptive analysis of how students perceive CMB participation's importance to student

development.

The demographic data presented here describe the diversity of the participants (*N* = 768). The participants are college students who have participated in their college marching band in the United States (*N* = 19 states*)* during Fall 2018 (Table 1). The location of students shows that the sample population is not geographically homogenous, and represents different types of bands from across the United States. The largest numbers of participants were from the states of Pennsylvania, Florida, and Washington.

Table 1

Distribution of Participants by State of College/University Attended

State	Number of Participants
Arkansas	2
California	34
Connecticut	19
Florida	107
Kentucky	32
Maryland	43
Massachusetts	80
Michigan	41
New Hampshire	1
North Carolina	21
North Dakota	1
Oklahoma	1
Pennsylvania	174
Prefer not to answer	1
South Carolina	61
Texas	19
Utah	26
Virginia	1
Washington	97
Wisconsin	1

Primary instrument was queried to show diversity of instrument experience within the sample population, as a student's CMB participation experience can differ based on instrument. Participants reported their primary instrument with the largest groups being trumpet (n = 111), followed by saxophone (n = 106), piccolo (n = 102), and drumline/front ensemble (n = 92) (Table 2).

Table 2

Distribution of Participants by Self-Reported Primary Band Instrument

Instrument	***n***	**%**
Baritone/Euphonium	43	5.6
Clarinet	69	9.0
Colorguard	41	5.3
Dance Team	5	0.65
Drumline/Front Ensemble	92	12.0
Horn/Mellophone	66	8.6
Manager/Student Staff	5	0.65
Other	6	0.78
Piccolo/Flute	102	13.3
Saxophone	106	13.8
Trombone	71	9.2
Trumpet	111	14.5
Tuba	44	5.7
Twirler	7	0.91

Much of the research on student development has relied on class year of the participants to look for differences in how they perceive their development throughout

the college experience. The reported class year of the participants was divided almost evenly between the classifications *first year, sophomore, junior, and senior* (Table 3). The classification *beyond senior* had a low representation containing 6.8% of participants.

Table 3

Distribution of Participants by Self-Reported Class Year

Class Year	***n***	**%**
First Year	154	20.1
Sophomore	187	24.3
Junior	186	24.2
Senior	174	22.7
Beyond Senior	51	6.6
Prefer not to answer	16	2.1

I queried college major primarily to determine that the sample population was not homogenous and represents more than music majors. The participants reported approximately 150 distinct primary majors with Music Education (n = 78) being the most reported (Table 4). Biology (n = 45) was the next most reported followed by Computer Science (n = 42) and Psychology (n = 35). Only three majors represented more than 5% of the participant pool: Music Education (10.2%), Biology (5.9%), and Computer Science (5.5%).

Table 4

Distribution of Participants by Self-Reported Major

Primary Major	***n***	**%**
Music Education	78	10.2
Biology	45	5.9
Computer Science	42	5.5
Psychology	35	4.6
Environmental Science	22	2.9
Mechanical Engineering	21	2.7
Political Science	21	2.7
Mathematics	19	2.5
Chemical Engineering	18	2.4
English	17	2.2
Music	17	2.2
Electrical Engineering	16	2.1
Nursing	16	2.1
History	15	2.0
Neuroscience	15	2.0
Prefer not to answer	15	2.0
Education	13	1.7
Physics	13	1.7
Chemistry	10	1.3
Civil Engineering	9	1.2
Criminology	9	1.2
Communications	8	1.0
Computer Engineering	8	1.0
Industrial Engineering	8	1.0
Music Therapy	8	1.0
Biochemistry	7	0.92
Economics	7	0.92
Engineering	7	0.92
Finance	7	0.92
Microbiology	7	0.92
Accounting	6	0.78
Linguistics	6	0.78
Social Work	6	0.78
Other (n = 5 or less)	214	27.90

I asked participants to report their gender because a large number of student development studies have focused on the differences in how men and women experience and develop in college (Foubert et al, 2005; Harris & Lester, 2009; Wilson, 1999; Zacherman & Foubert, 2014). Women (*n* = 433) participated in this study more than men (*n* = 320) with 56.4% reporting female, 41.7% reporting male, and 1.9% choosing *prefer not to answer* (Table 5).

Table 5

Distribution of Participants by Self-Reported Gender

Gender	***n***	**%**
Female	433	56.4
Male	320	41.7
Prefer not to answer	15	1.9

Students in leadership positions usually have more opportunities to experience the seven vectors of development. Several studies previously reported that leaders tend to report higher levels of development than non-leaders (Cooper et al., 1994; Cress et al., 2001; Schuh and Laverty, 1983; Stanford, 1990; and Schuh & Laverty, 1983). When asked about leadership positions held in their band, participants were allowed to report multiple responses if they held more than one leadership position. More than half of participants (*n* = 400) reported having no leadership position (57%) within their CMB and 47.1% (n = 362) reported holding some type of leadership position (Table 6).

Table 6

Distribution of Participants by Self-Reported Leaders

Role	***n***	**%**
Leaders	362	47.1
Non-Leaders	400	52.1
Prefer not to answer	6	0.08

Participants reported holding the position of Section Leader (19.6%, $n = 178$) more than any other leadership position. The number of participants holding leadership positions in all other categories was less than 10% for all other types of leadership positions.

Table 7

Distribution of Participants' Self-Reported Leadership Roles

Leadership Role	***n***	**%**
None	400	44.1
Section Leader	178	19.6
Rank/Squad Leader	84	9.3
Other	76	8.4
Band Officer	49	5.4
Student Worker	46	5.0
Drum Major	34	3.7
Sub Section Leader	32	3.5
Prefer not to answer	6	0.66

Astin's (1991) Theory of Student Involvement explains that the more energy and time students put into their college experience, the more they gain. I asked the number of participants' extracurricular activities to assess if it changes how students respond to the 29 development goals. Participants reported the number of extracurricular activities they participated in outside of CMB with most reporting between one and three additional activities (Table 8). Participants reported zero activities (n = 117), one activity (n = 203), two activities (n = 215), or three activities (n = 152), or four or more activities (n = 81) with a mean of 1.9 (SD = 1.40) activities across the entire participant pool.

Table 8

Distribution of Participants by Self-Reported Extracurricular Activities Outside of CMB

Activities	***n***	**%**
Zero	117	15.2
One	203	26.4
Two	215	28.0
Three	152	19.8
Four or More	81	10.5

Participants (n = 751) reported the total number of directors and staff that worked with their own CMB the total number of directors and staff that instruct their CMB (Table 9). I queried this because bands with a larger staff may provide less opportunity for students to be involved in leadership positions, possibly affecting their perceptions of development. For the purposes of this study, I divided the staff sizes into three groups titled low, medium, and high to create three distinct groups for analysis. Three or fewer is a "low" or small staff, four to six staff members is a "medium" or average-size staff, and

seven or more is a “high” or large staff. Because I was unable to find extant research regarding staff size, I determined the cutoffs for these designations on personal observed experience as a college band director. Participants reported their staff size designation as follows: low group 34% (*n* = 261), medium group 38.5% (*n* = 296), and high group at 25.3% (*n* = 194), and 2.2% as prefer not to answer (*n* = 17).

Table 9

Distribution of Participants by Self-Reported Size of CMB Staff

Number of Staff	***n***	**%**
0–3 Low	261	34.0
4–6 Medium	296	38.5
7–20 High	194	25.3
Prefer not to answer	17	2.2

Similar to size of staff, the ratio of staff to student instruction can be a factor in how students perceive their development due to the experiences they receive. Participants chose from five categories to describe how much rehearsal responsibility lies with the instructional staff versus the students (Table 10). The most reported response was “75% staff and 25% students” reported by 47.8% of participants (*n* = 367). This provided a description of who rehearses CMBs in the United States and showed that primarily instructional staff rehearses a significant number of college marching bands with students assuming a smaller percentage of that responsibility.

Table 10

Distribution of Participants by Self-Reported Staff vs Student Instruction

Instruction Distribution	*n*	%
100% Staff	84	10.9
75% Staff / 25% Students	367	47.8
50% Staff / 50% Students	143	18.6
25% Staff / 75% Students	122	15.9
100% Students	45	5.9
Prefer not to answer	7	0.91

The final demographic question asked the number of halftime shows each participant's band prepares in one football season (Table 11). Participants reported between 1 and 10 shows per season. I divided the responses into two groups representing a low and high number of shows to categorize the type of CMB. There is no previous research on this factor, so no guidance was available to help determine a cutoff point for this variable. The cutoff for the low designation preparing four or fewer shows and the high designation preparing five or more was determined by my own personal experience of bands I have observed as a college band director. Some bands follow the drum corps style of working on one or a few very difficult shows performed many times compared to traditional college bands that usually perform several shows with less complexity that are new for each football game. The number and complexity of shows can affect the rehearsal style and subsequently the developmental experience of members. The number of participants who reported a high (n = 506) number of shows approximately doubled the amount that reported a low (n = 262) number.

Table 11

Participants by Self-Reported Number of Halftime Shows Prepared in One Season

Halftime Shows Prepared	*n*	%
0–4 Low	262	34.1
5–10 High	506	65.9

Data Analysis

To answer research question one, I calculated the mean score for each goal based on the four-point Likert scale used in the survey. The four-point scale included the choices: (1) no influence, (2) some influence, (3) moderate influence, and (4) strong influence. Mean scores indicated the level of influence that participants believed CMB participation had on each development goal. To determine how students perceived the vectors, I averaged the scores reported for goals specific to each vector. This indicated the how students perceived the importance CMB participation to experiencing each vector of development. Students indicated that CMB participation had "moderate influence" on the vectors *Developing Competence*, *Developing Purpose*, and *Managing Emotions* (Table 14).

To answer research question two, I divided the participants into two groups, leaders (n = 362) and non-leaders (n = 400), to see how the responses differed based on their role. I utilized an unpaired t-test to identify statistically significant differences between the means scores of the leaders and non-leaders for each goal. I used a t-test instead of an ANOVA test because I was comparing how two groups rated each goal, or the single dependent variable. I ran an individual t-test for each goal separately. I

calculated a Bonferroni correction to account for the possibility of a Type 1 error, but decided not to use the resulting significance level of 0.0017 because it would render almost all p-values insignificant. Using the .05 cutoff was acceptable because interpreting a given statistical comparison was not reliant on how many other comparisons were performed. Since this study is exploratory in nature, using a Bonferroni correction could have hindered reporting a real and important difference between groups that may warrant further exploration. The 29 *t*-tests revealed that 15 of 29 development goals showed statistical significance by rejecting the null hypothesis of no significant difference between the scores of the two groups by reporting $p < .05$. Leaders reported higher mean scores on these 15 goals compared to non-leaders, suggesting that being a leader does positively influence students' perception of development. Additionally, these 15 goals represent at least one of all seven vectors, suggesting that leadership does affect how all vectors are experienced.

For research question three, about level of involvement, I divided students into five groups based on the number of extracurricular activities they participate in outside of CMB. These five groups were zero, one, two, three, and four plus extracurricular activities outside of CMB participation. I used a one-way, between subjects, Analysis of Variance test (ANOVA) to determine the effect, if any, that the number of extracurricular activities had on the reported mean scores of each development goal. I used an ANOVA test instead of a MANOVA test because I comparing the mean rating of how multiple groups responded to each individual goal as a dependent variable. I ran an individual ANOVA test for each goal separately. Similar to question 2, I calculated a Bonferroni

correction to account for the possibility of a Type 1 error, but opted not to use the resulting significance level of 0.0017 because it would render almost all p-values insignificant. Using the .05 cutoff was acceptable because interpreting a given statistical comparison was not reliant on how many other comparisons were performed. The 29 ANOVA tests revealed statistically significant differences between how the five groups responded to the development goals.

Research question four encompassed the unanalyzed pieces of demographic information to determine how participants differ in their responses when divided into groups based on these categories. Due to the different number of groups for each demographic category, I utilized different methods of analysis for each of these variables. For the demographic "Gender," I analyzed how women and men respond using the mean scores for each development goal, and presented the most and least favorable goals for each gender. For "Class Year" of participants, I ran 29 Analysis of Variance tests, one for each goal, to determine if there was any statistically significant difference in how participants from different class years reported goals. For the "Size of Band Staff," I divided the participant responses into three groups: low 0 to 3, medium 4 to 6, and high 7 to 20 staff members. For "Ratio of Staff and Student Rehearsal," I used five categories to classify the number of staff versus student instruction that most appropriately represents a participant's CMB. For the final piece of demographic information, "Number of Shows Prepared," I divided participant responses into two groups. The high group included students from bands that performed five or more shows per year while the low group represents four or less shows per year. For these last three demographic variables, I

compared the mean scores of different groups for each development goal to determine what the most and least favorable goals were for each group and demographic item.

CHAPTER 4: RESULTS

The purpose of this study was to explore the perceived importance of CMB participation in the student development of CMB students in the United States. I obtained the perceptions of CMB students using a self-administered survey. Participants were asked to rate CMB participation's influence on their student development using a four-point Likert scale and to provide relevant demographic information. This chapter presents the results of this study in four sections based on the four research questions. Within each section, I explained the method of analysis and presented the resulting data to provide relevant answers to the research questions of this study.

Research Question 1

Research Question 1: How do students respond to the perceived importance of college marching band participation to development goals and the Seven Vectors of Development?

Chickering's Seven Vectors of Student Development are based on the idea that development occurs through a series of crises or challenges that students face. Specifically, CMB participation provides students those experiences that help them to move through the vectors. I have listed the vectors here and have provided shortened names for concise use in the tables of this study (Table 12).

Table 12

List of Chickering's Vectors and their shortened names

	Vector	Shortened Vector Name
1.	Developing competence	Developing Competence
2.	Managing emotions	Managing Emotions
3.	Moving through autonomy toward interdependence	Autonomy
4.	Developing mature interpersonal relationships	Mature Relationships
5.	Establishing identity	Establishing Identity
6.	Developing Purpose	Developing Purpose
7.	Developing integrity	Developing Integrity

These vectors can be divided into two groups. Vectors one through four are associated with building the foundation of student identity (Chickering & Reisser, 1993). Vectors five through seven represent the reinforcement of one's identity and way of being. College student development and the process of individualization occur in the act of progressing through these seven vectors or types of experiences (Chickering & Reisser, 1993).

I surveyed CMB students on 29 development goals to understand their perception of CMB participation's importance to each goal (Table 13). Utilizing a four-point scale, I calculated the mean score for each goal. The four-point scale included the choices: (1) no influence, (2) some influence, (3) moderate influence, and (4) strong influence. I omitted participants who reported a zero on a particular goal because zero represents the belief that a goal "does not apply" to CMB participation.

Next, I utilized the mean scores of goals, specific to each vector, to determine

how participants perceived Chickering's vectors. Because participants did not have a frame of reference for understanding Chickering's vectors, I utilized responses on goals to infer how they perceived the vectors. Students indicated that CMB participation had "moderate influence" on the vectors *Developing Competence*, *Developing Purpose*, and *Managing Emotions* (Table 14). I organized and presented the results by vector ranked from high to low score (Table 14).

Table 13

Overall Participants' Mean Scores for 29 Student Development Goals

Q	Vector	Development Goal	*N*	*M*	*SD*	Did Not Answer
1	Autonomy	ability to make decisions	751	2.64	0.94	17
2	Autonomy	reduced need for reassurance	747	2.40	1.00	21
3	Autonomy	ability to think for myself	753	2.80	1.00	15
4	Autonomy	ability to meet deadlines	756	2.98	0.99	12
5	Autonomy	reduction of parental involvement	726	2.62	1.15	42
6	Autonomy	showing up on time	762	3.18	1.03	6
7	Autonomy	ability to organize a meeting	741	2.75	1.05	27
8	Developing Competence	ability to solve problems	756	2.80	0.99	12
9	Developing Competence	increase in social interaction	767	3.67	0.65	1
10	Developing Competence	effectively communicate with others	765	3.28	0.85	3
11	Developing Competence	improvement in musical ability	748	3.07	1.00	20
12	Developing Competence	work successfully as a team	761	3.37	0.82	7
13	Developing Competence	manage my time	766	3.29	0.89	2
14	Developing Integrity	humanize values and empathize	755	2.83	0.94	13
15	Developing Integrity	desire to engage in community service	742	2.44	1.08	26
16	Developing Integrity	desire to help others in need	750	2.64	1.03	18

Q	Vector	Development Goal	*N*	*M*	*SD*	Did Not Answer
17	Developing Purpose	commit to seeing a project to end	757	2.99	1.02	11
18	Developing Purpose	defining your leadership style	745	3.08	1.01	23
19	Developing Purpose	creating a feeling of family	765	3.61	0.72	3
20	Developing Purpose	understand compliance with rules	757	2.91	1.00	11
21	Establishing Identity	comfort with experimentation	754	2.92	0.93	14
22	Establishing Identity	understand my role in an organization	759	3.15	0.89	9
23	Establishing Identity	growth due to a disciplinary situation	611	2.76	1.11	157
24	Establishing Identity	comfort with self-identity	744	2.81	1.02	24
25	Establishing Identity	accepting your sexual orientation	584	1.90	1.14	184
26	Managing Emotions	ability to handle frustrating situations	755	2.94	0.93	13
27	Managing Emotions	ability to take criticism	761	3.06	0.92	7
28	Mature Relationships	accept others different from you	745	2.88	1.07	23
29	Mature Relationships	understand the politics of organization	753	3.03	0.94	15

Table 14

Overall Participants' Mean Scores for the Seven Vectors

Vector	*n*	*M*	*SD*
Developing Competence	4563	3.25	0.84
Developing Purpose	3024	3.15	0.97
Managing Emotions	1516	3.00	0.86
Mature Relationships	1498	2.95	1.02
Autonomy	5236	2.77	1.10
Establishing Identity	3452	2.75	1.19
Developing Integrity	2247	2.64	1.06

Developing Competence

CMB students reported the highest mean score for vector of *Developing Competence* ($M = 3.25$, $SD = 0.84$) consisting of six development goals. Its highest reported goal was "increase in social interaction," whose mean score was 3.67 ($SD = 0.65$), and was also the highest of all 29 surveyed goals. The second highest reported goal was "work successfully as a team," with an average score of 3.37 ($SD = 0.82$) (Table 15). It is logical that students rated these two goals high given that college marching bands foster social interaction by requiring teamwork for long periods of time to perform a marching field show.

The goals "manage my time" ($M = 3.29$, $SD = 0.89$) and "effectively communicate with others" ($M = 3.28$, $SD = 0.85$) also rated above 3.0 and appear to hold importance with CMB students. Time management is an important aspect of college life, and marching band participation often requires students to budget their time effectively (Cumberledge, 2015). Similarly, effective communication skills are needed on a daily basis in marching band rehearsals (Warfield, 2013).

The remaining two goals placed lowest within this vector, but were higher than goals from other vectors. The goal "improvement in musical ability" ($M = 3.07$, $SD = 1.00$) represents going through a process to develop competence in a skill set. Its score above 3.0 indicates that most participants rated CMB participation, using the Likert-type scale label, as having "moderate influence" on learning to improve their musical skills. When comparing this musical development goal to non-musical goals, some non-musical goals scored higher. This could indicate that students are aware that CMB participation is

also important to non-musical development goals.

The "ability to solve problems" (M = 2.80, SD = 0.99) was the lowest reported goal under *Developing Competence*, indicating the participants believe that CMB participation has "some influence" on this goal. College marching bands, as both musical and social organizations, present challenges that require participants to use and develop their ability to solve problems.

Table 15

Overall Participants' Mean Scores for the vector Developing Competence

Q	Development Goal	*N*	Mean	Standard Deviation	No Answer
8	ability to solve problems	756	2.80	0.99	12
9	increase in social interaction	767	3.67	0.65	1
10	effectively communicate with others	765	3.28	0.85	3
11	improvement in musical ability	748	3.07	1.00	20
12	work successfully as a team	761	3.37	0.82	7
13	manage my time	766	3.29	0.89	2

Developing Purpose

CMB students reported the vector *Developing Purpose* as the second most important vector to CMB participation with a mean score of 3.15 (SD = 0.97) across four surveyed goals. Participants rated the goal, "creating a feeling of family," the highest within this vector with a mean score of (M = 3.61, SD = 0.72), which was also the second highest of all 29 goals. This is in line with the work of Strayhorn (2012) who suggests that much of college life is about finding a sense of belonging or as Chickering denotes

"developing purpose" (Chickering & Reisser 1993). Being a part of something larger than oneself and feeling a sense of belonging is integral to developing purpose. Based on this high score, it appears that CMB students perceive creating a feeling of family is important when they experience this vector.

Participants reported the goals "defining your leadership style" (M = 3.08, SD = 1.01) and "commit to seeing a project to end" (M = 3.29, SD = 1.02) as "moderately influenced" by CMB participation (Table 16). The mean score for "defining your leadership style" could change dependent on a student holding a leadership position. I re-analyzed he results of "developing your personal leadership style" by dividing participants into two groups: leaders (n = 361) and non-leaders (n = 379). The analysis showed a difference between the two groups as those with leadership positions reported an average score of 3.45 (SD = 0.79) compared to those without leadership positions reporting 2.73 (SD = 1.07).

Table 16

Overall Participants' Mean Scores for the vector Developing Purpose

Q	Development Goal	*N*	Mean	Standard Deviation	No Answer
17	commit to seeing a project to end	757	2.99	1.02	11
18	defining your leadership style	745	3.08	1.01	23
19	creating a feeling of family	765	3.61	0.72	3
20	understand compliance with rules	757	2.91	1.00	11

The lowest reported goal in this vector was the ability to "understand compliance with rules" with a score of 2.91 (SD = 1.01). Understanding rules and making decisions

with intentionality is a valued part of the vector *Developing Purpose*. With the number of rules and regulations associated with CMB participation, it was surprising that this goal ranked lower than other goals within this vector.

Managing Emotions

The vector *Managing Emotions* ranked third of seven vectors with an overall mean score of 3.00 (*SD* = 0.86). One possible weakness in the mean score of this vector is that it there were only two developmental goals, and mean scores can provide a false narrative if derived from only two scores. The mean scores of these goals were .12 apart.

Participants rated the goal "ability to take criticism" (*M* = 3.06, *SD* = 0.92) the highest (Table 17). Chickering and Reisser (1993) note that "emotions have a way of confounding skill and discipline" as students are learning to control their emotions (p. 84). Criticism from others can evoke strong emotions that cause students to act in unhealthy and sometimes disruptive ways, especially when that criticism comes from fellow students. Criticism is often a part of CMB participation in that both instructional staff and student leaders spend a large amount of time giving corrective feedback to subordinate students in order to make the group performance stronger.

The other goal from this vector, "ability to handle frustrating situations," received a mean score of 2.94 (*SD* = 0.93). The term "frustrating situations" is probably a bit vague in its explanation of the goal, but at times CMB members can be faced with situations that put them at odds with fellow students or band administration. Using their Group Socialization Theory, Levine and Moreland (1994) explain that group members either adapt or leave the group in situations involving conflict. While this theory does not

specifically refer to CMB members, it does apply generally to groups and organizations like CMBs. The score of 2.94 could indicate that students prefer to adapt rather than leave the organization when frustrating situations occur.

Table 17

Overall Participants' Mean Scores for the vector Managing Emotions

Q	Development Goal	*N*	Mean	Standard Deviation	No Answer
26	ability to handle frustrating situations	755	2.94	0.93	13
27	ability to take criticism	761	3.06	0.92	7

Mature Relationships

The vector *Mature Relationships* (*M* = 2.95, *SD* = 1.02) also has only two goals and averaged just slightly lower than *Managing Emotions*. Its two goals had mean scores of 2.88 (*SD* = 1.07) and 3.03 (*SD* = 0.94). Chickering and Reisser (1993) describe this vector as having two components; "(1) tolerance and appreciation of differences and (2) capacity for intimacy" (p. 146). Moving through this vector helps students learn to interact respectfully with others who are different from them and to respect those differences. Developing a capacity for intimacy refers to relationships among close friends and partners, something that often occurs with CMB students as they become intimate with someone or make close friends within the organization.

The higher ranked development goal was the ability to "understand the politics of organization," with a score of 3.03 (*SD* = 0.94) (Table 18). This result suggests that students believe that understanding the politics of an organization is "moderately influenced" by CMB participation. Developing this goal fosters the ability to maintain a

mature attitude and manage relationships formed through CMB participation.

In comparison, the goal "accept others different from you" received a lower score of 2.88 (*SD* = 1.07). It is interesting that participants ranked this goal lower given that college marching bands tend to be large groups that feature diverse populations. Participation in a diverse population usually encourages the development of accepting others different from you (Koppelman, 2011, p, 15).

Table 18

Overall Participants' Mean Scores for the vector Mature Relationships

Q	Development Goal	*N*	Mean	Standard Deviation	No Answer
28	accept others different from you	745	2.88	1.07	23
29	understand the politics of organization	753	3.03	0.94	15

Autonomy

Autonomy is a vector that includes goals to help students learn to function on their own and realize their interdependence with the world around them. This includes areas of emotional independence, instrumental independence, and interdependence (Chickering & Reisser, 1993). These goals help students to move from parental guidance to learning how to handle responsibilities on their own. Students partially achieve some of these goals prior to college, but participation college, where parental involvement is at a minimum, reinforces these goals.

Participants rated the vector *Autonomy* below the "moderately influenced" threshold, ranking fifth among the seven vectors with an average score of 2.77 (*SD* = 1.10). *Autonomy* receiving a lower ranking is surprising considering that developing

personal responsibility is important to CMB participation. While a score of 2.77 does not indicate that students found these areas to have no importance, they appear to perceive them as less important than other vectors and goals. There were seven development goals surveyed within this vector and only "showing up on time" (*M* = 3.18, *SD* = 1.03) received a score above 3.0 (Table 19).

The goal of developing a "reduced need for reassurance" was the lowest ranked goal within this vector with a mean score of 2.40 (*SD* = 1.00). Creating emotional independence is the ability of students to learn control of their emotions without reassurance by parents, leaders, and friends. Participating in a college marching band often requires students to take personal responsibility in functioning in a harmonious way with others to perform as one unit. College marching band students learn to perform their role without constant reassurance from staff and leaders, but it is unlikely that students realize this or attribute progress toward this goal to CMB participation. It is possible that students develop this skill through CMB participation, but do not realize it.

Table 19

Overall Participants' Mean Scores for the vector Autonomy

Q	Development Goal	*N*	Mean	Standard Deviation	No Answer
1	ability to make decisions	751	2.64	0.94	17
2	reduced need for reassurance	747	2.40	1.00	21
3	ability to think for myself	753	2.80	1.00	15
4	ability to meet deadlines	756	2.98	0.99	12
5	reduction of parental involvement	726	2.62	1.15	42
6	showing up on time	762	3.18	1.03	6
7	ability to organize a meeting	741	2.75	1.05	27

Establishing Identity

The vector *Establishing Identity*, with an overall mean score of 2.75 (*SD* = 1.19), ranked sixth based on the mean responses for its five goals. It also had the largest standard deviation (*SD* = 1.19) of all vectors, indicating the responses were more varied for this vector compared to the others. *Establishing Identity* is "the process of discovering with what kinds of experiences…we resonate in satisfying in safe or in self-destructive fashion" (Chickering & Reisser, 1993, p. 49). Many of the goals within this vector are like those of *Developing Purpose* and *Developing Integrity*. However, *Establishing Identity* also requires progress to occur in other vectors at the same time, such as *Autonomy*, *Managing Emotions*, *Mature Relationships*, and *Developing Competence* (Chickering & Reisser, 1993). Much of *Establishing Identity* encourages students to develop personal ownership and make decisions on what they like, how they dress, how they look, and how they act, while functioning with reduced parental influence.

Participants rated the goal of "accepting your sexual orientation" with a mean score of 1.9 (*SD* = 1.14), the lowest of all 29 goals (Table 20). Participants perceived CMB participation primarily as having "some influence" to "no influence" on this goal. As a possibly controversial goal, students responses were greatly varied, as indicated by its standard deviation of 1.14. It is possible that students do experience development in this area but do not attribute it to CMB participation because instead they associate musical and organizational skills as the primary areas of development achieved. This result indicates that most students perceived CMB participation to have little influence on "acknowledging one's sexual orientation."

Table 20

Overall Participants' Mean Scores for the vector Establishing Identity

Q	Development Goal	*N*	Mean	Standard Deviation	No Answer
21	comfort with experimentation	754	2.92	0.93	14
22	understand my role in an organization	759	3.15	0.89	9
23	growth due to a disciplinary situation	611	2.76	1.11	157
24	comfort with self-identity	744	2.81	1.02	24
25	accepting your sexual orientation	584	1.90	1.14	184

In contrast, CMB students rated the goal "understand my role in an organization" with a mean score of 3.15 (*SD* = 0.89). The difference between the score of this goal and the prior goal helps to account for the large standard deviation of this vector. College marching bands are hierarchical organizations often with regimented command structures (Warfield, 2013). This usually involves dividing the organization into groups by different identifiers, such as instrument, and then dividing those into smaller groups. Each of these structural divisions usually have leaders who report up to the next level in the command chain, leading back to band directors and staff at the top. The results indicate that CMB students believe that participating in an organization with this type of hierarchy has "moderate influence" on understanding their role and responsibility within the organization. One can find similar hierarchical structures in most musical organizations and many extracurricular clubs, but it seems amplified for CMB members due to large amount of time CMB students spend interacting socially and leading other members when compared to the same experience in concert ensembles and choral groups.

The three remaining goals under the vector *Establishing Identity* received similar scores, and suggest that students perceived CMB participation to have "some influence" on these goals. The goals "comfort with experimentation" ($M = 2.92$, $SD = 0.93$) and "comfort with self-identity" ($M = 2.81$, $SD = 1.02$) are similar in how they contribute to developing identity because one leads to the other. According to Chickering and Reisser (1993), comfort with experimentation is the ability to reach outside of one's comfort zone and try something new without parental or external encouragement. The ability to feel comfort with self-identity provides students the confidence to engage in experimentation. This is especially true when students experience failure while trying new things. The initial year of CMB participation can be stressful as the pressure of both making the band and assimilating into the band's culture takes students out of their comfort zone. However, even though CMB participation provides a platform through which to experience these two goals, students perceive it to have only "some influence." The lowest goal within this vector, "growth due to a disciplinary situation" ($M = 2.76$, $SD = 1.11$) received a large number of "does not apply" responses ($n = 157$). Some respondents may not have experienced a disciplinary situation as a member of their CMB. Of the remaining 611 participants that provided a rank of importance, the standard deviation of mean score was the third largest of all 29 goals. This suggests that there were varied beliefs on the importance of disciplinary situations experienced within a CMB and their influence on student development.

Developing Integrity

Participants ranked *Developing Integrity* (*M* = 2.64, *SD* = 1.06) the lowest of the seven vectors, with all three of its goals scoring below 3.0. For college students, "*Developing Integrity* involves reviewing personal values in an inquiring environment that emphasizes diversity, critical thinking, the use of evidence, and experimentation" (Chickering & Reisser, 1993, p. 235). This vector is closely related to the vectors *Developing Purpose* and *Establishing Identity* in that "core values and beliefs provide the foundation for interpreting experience, guiding behavior, and maintaining self-respect" (Chickering & Reisser, 1993, p. 235).

The goal of "humanize values and empathize" received a mean score of 2.83 (*SD* = 0.94), the highest of the three goals from this vector (Table 21). If learning to humanize values is fostered through participation in an "inquiring environment," CMB participation provides opportunities for social interaction and interpersonal skill development (Chickering & Reisser, 1993, p. 235). The goal "desire to help others in need" received a score of 2.64 (*SD* = 1.03), and the goal "desire to engage in community service" received a 2.44 (*SD* = 1.08). CMB organizations can provide students opportunities to develop integrity through service organizations, social interaction, working interaction during rehearsals, and interaction through leadership roles. Even with these experiences, participants reported that CMB participation has "some influence" on *Developing Integrity,* which is not a high rating. This suggests that some students are either unaware of the impact that CMB participation has on developing integrity or they are not currently progressing through this vector.

Table 21

Overall Participants' Mean Scores for the vector Developing Integrity

Q	Development Goal	*N*	Mean	Standard Deviation	No Answer
14	humanize values and empathize	755	2.83	0.94	13
15	desire to engage in community service	742	2.44	1.08	26
16	desire to help others in need	750	2.64	1.03	18

In trying to answer this research question, I have provided a picture of how CMB students perceive its importance to their student development. The answers to this question were descriptive to provide a base line of information conveyed in a highest-rated to lowest-rated order by each vector. To recap the results, participants perceived the vectors *Developing Competence* and *Developing Purpose* as most influenced by CMB participation while they perceived *Establishing Identity* and *Developing Integrity* as the least influenced. Subsequently, they also perceived the development goal "increase in social interaction" under the vector *Developing Competence* as most influenced and "accepting your sexual orientation" as least influenced by CMB participation. From top to bottom this information provides a picture for us to begin to understand the student perceptions on their development through CMB participation.

Research Question 2

Research Question 2: How do students who hold leadership positions in college marching band differ from those who do not in relation to perceived importance of development goals?

Certain characteristics of the participants can cause different perceptions of how CMB participation influences student development. Leadership roles are one of those characteristics due to the prominence of available leadership roles within college marching bands. Several studies previously reported that leaders tend to report higher levels of development than non-leaders (Cooper et al., 1994; Cress et al., 2001; Schuh & Laverty, 1983; and Stanford, 1990).

I divided the participants into two groups, leaders (n = 362) and non-leaders (n = 400), to see how the responses differed based on their role. In almost every goal, the leaders rated the importance of CMB participation on their development higher than non-leaders (Table 22). The average of the leaders' scores across all goals was .16 higher than the non-leaders. With reference to Astin's Theory of Student Involvement, I expected that leaders would rate the importance of CMB participation higher than non-leaders. Astin's theory stated that the more time and physical energy that students put into experiences in college, the more rewards they will benefit in development (Astin, 1991, 1993, 1997). Leaders in college marching bands often input "more time and physical energy" than non-leaders, possibly explaining why they reported higher scores.

Table 22

Overall Scores by Self-Reported Leadership Role

Q	DEVELOPMENT GOAL	ROLE	*n*	*M*	*SD*	Mean differ-ence	*p*
1	ability to make decisions	Leader	355	2.78	0.91	0.28	< 0.001**
		Non-Leader	391	2.50	0.94		
2	reduced need for reassurance	Leader	351	2.44	0.98	0.07	0.328
		Non-Leader	390	2.37	1.03		
3	ability to think for myself	Leader	358	2.91	0.99	0.19	0.009**
		Non-Leader	390	2.72	0.99		
4	ability to meet deadlines	Leader	357	3.07	0.93	0.16	0.03*
		Non-Leader	394	2.91	1.03		
5	reduction of parental involvement	Leader	336	2.63	1.14	0.02	0.835
		Non-Leader	385	2.61	1.16		
6	showing up on time	Leader	360	3.18	1.03	0.00	0.984
		Non-Leader	396	3.18	1.02		
7	ability to organize a meeting	Leader	358	3.03	0.95	0.54	< 0.001**
		Non-Leader	377	2.49	1.07		
8	ability to solve problems	Leader	358	3.00	0.95	0.38	< 0.001**
		Non-Leader	392	2.62	0.99		
9	increase in social interaction	Leader	361	3.75	0.57	0.16	0.001**
		Non-Leader	400	3.60	0.70		
10	effectively communicate with others	Leader	361	3.43	0.77	0.29	< 0.001**
		Non-Leader	398	3.14	0.90		
11	improvement in musical ability	Leader	350	2.99	1.01	-0.14	0.056
		Non-Leader	393	3.13	0.99		
12	work successfully as a team	Leader	360	3.44	0.75	0.12	0.036*
		Non-Leader	395	3.31	0.87		
13	manage my time	Leader	361	3.35	0.84	0.11	0.084
		Non-Leader	399	3.24	0.93		
14	humanize values and empathize	Leader	357	2.93	0.90	0.18	0.008**
		Non-Leader	393	2.75	0.97		
15	desire to engage in community service	Leader	351	2.51	1.09	0.13	0.114
		Non-Leader	386	2.38	1.08		
16	desire to help others in need	Leader	353	2.78	1.01	0.25	0.001**
		Non-Leader	392	2.52	1.04		
17	commit to seeing a project to end	Leader	358	3.06	0.98	0.11	0.133
		Non-Leader	394	2.94	1.05		
18	defining your leadership style	Leader	361	3.45	0.79	0.72	< 0.001**
		Non-Leader	379	2.73	1.07		
19	creating a feeling of family	Leader	361	3.72	0.60	0.21	< 0.001**
		Non-Leader	398	3.51	0.80		
20	understand compliance with rules	Leader	359	2.96	0.96	0.08	0.270
		Non-Leader	393	2.88	1.03		
21	comfort with experimentation	Leader	358	2.92	0.92	0.00	0.977
		Non-Leader	392	2.92	0.93		

Q	DEVELOPMENT GOAL	ROLE	*n*	*M*	*SD*	Mean differ-ence	*p*
22	understand my role in an organization	Leader	360	3.28	0.83	0.23	< 0.001**
		Non-Leader	394	3.05	0.93		
23	growth due to a disciplinary situation	Leader	285	2.79	1.11	0.06	0.481
		Non-Leader	321	2.73	1.11		
24	comfort with self-identity	Leader	350	2.89	1.03	0.14	0.061
		Non-Leader	389	2.75	1.00		
25	accepting your sexual orientation	Leader	281	1.85	1.12	-0.10	0.314
		Non-Leader	298	1.95	1.16		
26	ability to handle frustrating situations	Leader	357	3.04	0.90	0.19	0.005**
		Non-Leader	393	2.85	0.95		
27	ability to take criticism	Leader	360	3.12	0.89	0.12	0.081
		Non-Leader	396	3.00	0.95		
28	accept others different from you	Leader	353	2.89	1.09	0.02	0.786
		Non-Leader	387	2.87	1.05		
29	understand the politics of organization	Leader	359	3.17	0.85	0.26	< 0.001**
		Non-Leader	388	2.91	1.01		

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

I utilized an unpaired *t*-test to identify statistically significant differences between the means scores of the leaders and non-leaders for each goal individually (Table 22). I did not use an ANOVA test because I was looking for statistical significance between two groups, leaders and non-leaders, for each goal separately rather than comparing all the goals to each other. Therefore, I ran 29 separate *t*-tests, one for each goal. I calculated a Bonferroni correction to account for the possibility of a Type 1 error, but decided not to use the resulting significance level of 0.0017 because it would render almost all *p*-values insignificant. Using the .05 cutoff was acceptable because interpreting a given statistical comparison was not reliant on how many other comparisons were performed. Since this study is exploratory in nature, using a Bonferroni correction could have hindered reporting a real and important difference between groups that may warrant further exploration.

The *t*-test revealed that 15 of 29 development goals showed statistical significance

by rejecting the null hypothesis of no significant difference between the scores of the two groups by reporting $p < .05$. Leaders reported higher mean scores on these 15 goals compared to non-leaders, suggesting that being a leader does positively influence students' perception of development. Additionally, these 15 goals represent at least one of all seven vectors, suggesting that leadership does affect how all vectors are experienced.

Statistically significant development goals with the largest difference between the mean scores of leaders and non-leaders, greater than .29, were: "defining your leadership style," $t(738) = 10.37$, $p = .00$, "ability to organize a meeting," $t(733) = 7.2$, $p < .001$, "ability to solve problems," $t(748) = 5.3$, $p < .001$, and "effectively communicate with others," $t(757) = 4.69$, $p < .001$. Leaders rated all these goals higher or equal to 3.0, indicating they perceived these, in the Likert-style survey category, as "moderately influenced."

In contrast, leaders and non-leaders reported no difference, or equal mean scores, for the goals "showing up on time" $t(754) = .020$, $p = 0.98$ and "comfort with experimentation" $t(748) = .028$, $p = 0.98$. A *t*-test indicated no significant difference between the responses of the two groups on these goals. These are both goals that all CMB students would experience regardless of being a leader, possibly explaining why leadership did not seem to affect how students rated them. The 14 goals ($M = 2.83$, $SD = .38$) that showed no statistically significant difference displayed lower mean scores than the 15 goals ($M = 3.18$, $SD = .31$) that did show a significant difference.

It is also noteworthy that non-leaders reported higher scores than leaders on two

development goals, although a *t*-test showed no statistical significance in how these groups differed. Nevertheless, non-leaders reported a mean score .14 higher than leaders for the goal "improvement in musical ability" $t(741) = 1.91$, $p = 0.56$, under the vector *Developing Competence*. A possible explanation for this is that some non-leaders may have weaker instrumental skills and may be younger members of their CMB. In contrast, most leaders tend to be more experienced instrumentalists and as well as older members. Younger and musically weak instrumentalists usually have more room for improvement, potentially accounting for rating this goal higher. By looking at the leadership classification of the participants separated by class year, it is evident that students with more seniority hold more leadership positions. The percentages of students classified as leaders within each class are: First-Year Students (23.4%), Sophomores (28.9%), Juniors (52.2%), Seniors (74.1%), and Beyond Senior (72.5%) (Table 23). This provides support for the notion that older students tend to be leaders.

Table 23

Distribution of Leadership Role by Class Level

Class Level	**non-leaders**	**leaders**	**PNA**
First Year	117	36	1
Sophomore	130	54	3
Junior	88	97	1
Senior	44	129	1
Beyond Senior	14	37	0
Prefer not to answer	7	9	0
Participants	**400**	**362**	**6**

The second goal in which non-leaders scored higher than leaders is "accepting your sexual orientation" $t(577) = 1.01$, $p = 0.31$. Under the vector *Establishing Identity*, this goal received a mean score of 1.95 ($SD = 1.16$) by non-leaders, which was .1 higher than leaders (Table 24). It is difficult to draw any conclusions from this because the difference is so small, and both scores received the Likert-type scale rating "some influence," at 1.95 and 1.85.

Two goals received equal scores from both leaders and non-leaders. Under the vector *Autonomy*, the goal of "showing up on time" received a mean score of 3.18 from both groups. Similarly, "comfort with experimentation" from the vector *Establishing Identity*, received a mean score of 2.92 from both groups (Table 24). Given that both groups reported the same mean score, both leaders and non-leaders are generally in agreement on the level of importance of these goals.

Table 24

Leadership t-test Results by Mean Difference and Statistical Significance

Development Goal	**leaders**		**non-leaders**		**Mean Differ-ence**	***p***
	M	***SD***	***M***	***SD***		
defining your leadership style	3.45	0.79	2.73	1.07	0.72	< 0.001**
ability to organize a meeting	3.03	0.95	2.49	1.07	0.54	< 0.001**
ability to solve problems	3.00	0.95	2.62	0.99	0.38	< 0.001**
effectively communicate with others	3.43	0.77	3.14	0.90	0.29	< 0.001**
ability to make decisions	2.78	0.91	2.50	0.94	0.28	< 0.001**
understand the politics of organization	3.17	0.85	2.91	1.01	0.26	< 0.001**
desire to help others in need	2.78	1.01	2.52	1.04	0.25	0.001**
understand my role in an organization	3.28	0.83	3.05	0.93	0.23	< 0.001**
creating a feeling of family	3.72	0.60	3.51	0.80	0.21	< 0.001**
ability to handle frustrating situations	3.04	0.90	2.85	0.95	0.19	0.005**

Development Goal	leaders		non-leaders		Mean Differ-ence	*p*
	M	***SD***	***M***	***SD***		
ability to think for myself	2.91	0.99	2.72	0.99	0.19	0.009**
humanize values and empathize	2.93	0.90	2.75	0.97	0.18	0.008**
ability to meet deadlines	3.07	0.93	2.91	1.03	0.16	0.03*
increase in social interaction	3.75	0.57	3.60	0.70	0.16	0.001**
work successfully as a team	3.44	0.75	3.31	0.87	0.12	0.036*
comfort with self-identity	2.89	1.03	2.75	1.00	0.14	0.061
desire to engage in community service	2.51	1.09	2.38	1.08	0.13	0.114
ability to take criticism	3.12	0.89	3.00	0.95	0.12	0.081
commit to seeing a project to end	3.06	0.98	2.94	1.05	0.11	0.133
manage my time	3.35	0.84	3.24	0.93	0.11	0.084
understand compliance with rules	2.96	0.96	2.88	1.03	0.08	0.270
reduced need for reassurance	2.44	0.98	2.37	1.03	0.07	0.328
growth due to a disciplinary situation	2.79	1.11	2.73	1.11	0.06	0.481
accept others different from you	2.89	1.09	2.87	1.05	0.02	0.786
reduction of parental involvement	2.63	1.14	2.61	1.16	0.02	0.835
showing up on time	3.18	1.03	3.18	1.02	0.00	0.984
comfort with experimentation	2.92	0.92	2.92	0.93	0.00	0.977
accepting your sexual orientation	1.85	1.12	1.95	1.16	-0.10	0.314
improvement in musical ability	2.99	1.01	3.13	0.99	-0.14	0.056

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

This research question asked if leaders and non-leaders differ in their perceived importance of CMB participation on the surveyed development goals. Given that there were only two groups to compare, an evaluation of mean scores and a *t*-test showed that leaders and non-leaders differ in how they rate approximately half of the development goals. An evaluation of mean scores also indicates that leaders not only differ, but they rate development goals higher than non-leaders do.

Research Question 3

Research Question 3: Do students with different numbers of extracurricular activities outside of college marching band differ in relation to perceived importance of development goals?

Astin's (1991) Theory of Student Involvement asserts that the more involvement students have in college, the more development gains they will get out of the experience. Previous studies have also reported positive correlation between increased involvement in extracurricular activities and higher development within these vectors (Abrahamowicz, 1988; Anaya, 1996; Cooper et al., 1994; Elliott 2009; Foubert & Grainger 2006; Gellin, 2003; Kuh, 1999; Kuh, 2005; Magolda, 1992; Martin, 2000; Schuh & Laverty, 1983; Stanford, 1990; Wilson, 1999). An analysis of the reported scores, cross-referenced with the number of extra-curricular activities the participants were involved with outside of CMB, showed a trend that supports Astin's (1991) theory and previous research listed above.

I divided participants into five groups based on their reported number of extracurricular activities outside of CMB: Zero (n = 117), One (n = 203), Two (n = 215), Three (n = 152), and Four or more (n = 81). In 19 of 29 goals, the group participating in zero extracurricular activities outside of CMB reported the lowest average score of the five groups. Students who participate in one or more extracurricular activities outside of CMB reported higher scores and a stronger perception of its importance to their student development.

Students that participated in one extracurricular activity outside of band reported

the highest average score in 15 of 29 goals, the most of any group. Students participating in four or more extracurricular activities reported the highest score in 10 of 29 goals. However, the same group also reported the lowest score in four goals. This discrepancy in the group with more activities may indicate that student perceptions of the importance of these goals are more varied as the number of activities increases. Nevertheless, participation in more extracurricular activities does appear to positively influence a student's perception of CMB on development goals.

I used a one-way, between subjects, Analysis of Variance test (ANOVA) to determine the effect, if any, that the number of extracurricular activities had on the reported mean scores of each development goal. I did not run a MANOVA test because I was looking for statistical significance of how these five groups of participants rated each goal separately. I ran 29 separate ANOVA tests, one for each goal, so each goal functioned as the dependent variable separate from one another. Similar to the data analysis in question two, I calculated a Bonferroni correction to account for the possibility of a Type 1 error, but decided not to use the resulting significance level of 0.0017 because it would render almost all *p*-values insignificant. Using the .05 cutoff was acceptable because interpreting a given statistical comparison was not reliant on how many other comparisons were performed.

The ANOVA test revealed that 9 of 29 development goals showed statistical significance rejecting the null hypothesis of no significant difference between the mean scores of the groups by reporting $p < .10$. If we use $p < .05$, then 3 of 29 groups showed statistical significance (Table 25). I ran a one-way, between subjects, ANOVA test to

compare the effect of number of extracurricular activities on reported mean scores of each development goal in zero, one, two, three, and four plus conditions. There was a significant effect of amount of extracurricular activities on the goal “manage my time” at the $p < .05$ level for the five conditions [$F(4, 761) = 4.34$, $p = 0.01$], the goal “increase in social interaction” at the $p < .05$ level for the five conditions [$F(4, 762) = 3.11$, $p = 0.015$], and the goal “ability to solve problems” at the $p < .05$ level for the five conditions [$F(4, 751) = 2.74$, $p = 0.028$]

Table 25

ANOVA for Development Goal Mean Scores by Number of Extracurricular Activities

Q	Development Goal	zero		one		two		three		four +		*F*	*p*
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
1	ability to make decisions	2.47	0.95	2.63	0.97	2.68	0.89	2.67	0.93	2.68	0.95	1.15	0.332
2	reduced need for reassurance	2.39	1.06	2.45	0.97	2.37	0.99	2.40	1.01	2.38	1.03	0.18	0.946
3	ability to think for myself	2.75	1.03	2.88	0.98	2.77	0.99	2.74	1.00	2.90	1.01	0.74	0.563
4	ability to meet deadlines	2.92	1.05	3.10	0.97	3.00	0.97	2.86	1.00	2.92	0.99	1.54	0.190
5	reduction of parental involvement	2.51	1.17	2.63	1.16	2.69	1.14	2.60	1.10	2.56	1.25	0.46	0.764
6	showing up on time	3.10	1.03	3.36	0.93	3.13	1.10	3.11	1.03	3.08	1.06	2.28	0.059*
7	ability to organize a meeting	2.58	1.11	2.78	1.01	2.75	1.04	2.76	1.09	2.89	1.04	1.10	0.358
8	ability to solve problems	2.60	0.98	2.86	1.00	2.75	0.99	2.81	0.96	3.05	1.00	2.74	0.028**
9	increase in social interaction	3.55	0.81	3.76	0.50	3.71	0.65	3.64	0.63	3.54	0.71	3.11	0.015**
10	effectively communicate with others	3.13	0.92	3.30	0.82	3.32	0.85	3.25	0.86	3.35	0.83	1.21	0.304
11	improvement in musical ability	2.96	1.04	3.09	0.96	3.11	1.00	3.01	1.04	3.14	0.99	0.65	0.626
12	work successfully as a team	3.26	0.96	3.47	0.77	3.34	0.81	3.36	0.83	3.37	0.79	1.25	0.289
13	manage my time	3.09	0.98	3.40	0.83	3.38	0.85	3.18	0.94	3.27	0.88	3.33	0.01**
14	humanize values and empathize	2.65	0.96	2.91	0.95	2.88	0.91	2.82	0.95	2.78	0.94	1.60	0.172
15	desire to engage in community service	2.21	1.08	2.44	1.03	2.57	1.11	2.43	1.12	2.44	1.07	1.97	0.097*
16	desire to help others in need	2.46	1.02	2.60	1.05	2.74	0.99	2.64	1.07	2.75	0.99	1.68	0.152
17	commit to seeing a project to end	2.86	1.10	3.00	0.97	3.03	0.98	2.93	1.07	3.20	1.02	1.56	0.184
18	defining your leadership style	2.85	1.01	3.11	0.99	3.07	1.04	3.12	1.01	3.24	0.94	1.97	0.098*
19	creating a feeling of family	3.45	0.88	3.67	0.64	3.64	0.73	3.63	0.66	3.53	0.74	2.07	0.083*
20	understand compliance with rules	2.83	1.03	3.00	0.98	2.93	0.99	2.82	0.98	2.95	1.05	0.92	0.450
21	comfort with experimentation	2.88	0.87	3.02	0.92	2.96	0.90	2.83	0.97	2.76	0.99	1.73	0.142
22	understand my role in an organization	3.03	0.95	3.24	0.81	3.17	0.89	3.07	0.90	3.23	0.93	1.59	0.175
23	growth due to a disciplinary situation	2.50	1.16	2.85	1.09	2.85	1.09	2.69	1.14	2.83	1.05	2.07	0.083*

Q	Development Goal	zero		one		two		three		four +		*F*	*p*
		M	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***		
24	comfort with self-identity	2.73	1.08	2.88	0.97	2.92	0.98	2.65	1.06	2.81	1.08	1.86	0.116
25	accepting your sexual orientation	1.73	1.04	2.05	1.19	1.94	1.16	1.79	1.11	1.86	1.15	1.52	0.194
26	ability to handle frustrating situations	2.79	0.92	3.08	0.90	2.89	0.99	2.92	0.91	3.00	0.88	2.15	0.073*
27	ability to take criticism	2.89	0.95	3.14	0.85	3.02	0.95	3.09	0.94	3.13	0.88	1.61	0.171
28	accept others different from you	2.81	1.11	2.98	1.01	2.80	1.11	2.83	1.05	2.99	1.06	1.20	0.310
29	understand the politics of organization	2.93	0.98	3.09	0.91	3.00	0.99	3.03	0.94	3.13	0.88	0.80	0.527
	TOTAL	**2.80**	**0.67**	**3.00**	**0.59**	**2.95**	**0.63**	**2.90**	**0.66**	**2.97**	**0.62**		

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

With the understanding that certain goals showed statistical significance for the notion that participants do rate them differently based on different numbers of extracurricular activities, the mean scores of those goals explain how they differ. For the goal "manage my time," participants reported the highest mean score in the one activity group (M = 3.40, SD = 0.83) and the lowest mean score in the zero-activity group (M = 3.09, SD = 0.98). For the goal "increase in social interaction," participants reported the highest mean score in the one activity group (M = 3.76, SD = 0.50) and the lowest mean scores in the zero-activity group (M = 3.55, SD = 0.81) and four plus activity group (M = 3.54, SD = 0.71). For the goal "ability to solve problems," participants reported the highest mean score in the four plus activity group (M = 3.05, SD = 1.00) and the lowest mean score in the zero-activity group (M = 2.60, SD = 0.98) (Table 26). The trend is that students in the group with zero activities outside of CMB rate these goals lower than students with more activities.

There is some variation in how participants from these groups rate development goals, but students from the group with one activity reported the highest mean scores across almost all goals, and rated 19 of 29 goals higher than all other groups of participants. This suggests that participating in one group outside of CMB might be the optimal number of extracurricular activities for the best student development results. However, the four plus activity group reported the highest mean scores for 10 of 29 goals. Both groups rated development goals higher than the zero-activity group, suggesting some support for Astin's (1991) Theory of Student Involvement. For a definition of this theory, Astin (1991) stated that the more involved a student is in their

college experience, the more output gained from that involvement.

This research question asked if participants differ in their responses based on participating in different numbers of extracurricular activities outside of CMB. Through an evaluation of mean scores and by running and ANOVA test, the results showed that the number of extracurricular activities does create difference in how participants rate nine of the development goals, but not all. In looking at the trends of mean scores, there is a positive increase in how participants rate goals when they have one or more activities outside of CMB. Previous studies have reported similar findings (Abrahamowicz, 1988; Anaya, 1996; Cooper et al., 1994; Elliott 2009; Foubert & Grainger 2006; Gellin, 2003; Kuh, 1999; Kuh, 2005; Magolda, 1992; Martin, 2000; Schuh & Laverty, 1983; Stanford, 1990; Wilson, 1999).

Research Question 4

Research Question 4 How do college marching band students from different demographic backgrounds respond to the perceived importance of development goals?

A descriptive analysis accounting for participant demographics provided information on the perceived importance of goals based on background. I did not analyze the demographic categories of state, major, and instrument for this question, but I asked them to provide a description of the diversity of the sample population. Evaluating the results based on these categories provided better understanding of the relationship between demographic characteristics and participant experience.

Gender

Participants self-reported their gender as male (n = 320), female (n = 433), or

prefer not to answer (n = 15). In reviewing the average scores between these categories, a trend appeared with women yielding higher scores than men. For every development goal, women reported a higher average score than men on their perception of CMB participation's importance to these goals. When averaging all goals together, women reported a mean score of 3.02 (SD = 0.36) compared to men reporting a score of 2.80 (SD = 0.37). On average, women reported the importance of CMB on their development .22 higher than men.

Some goals displayed a large difference between women and men's scores. The largest was a .41 difference for the goal of "growth due to a disciplinary situation." Women reported a mean score of 2.93 (SD = 1.07) and men reported 2.52 (SD = 1.13). Similarly, there was a .37 difference for the goal "accept others different from you," with women reporting a mean score of 3.03 (SD = 1.02) compared to men reporting 2.66 (SD = 1.09). Women reported 2.96 (SD = 0.94) and men reported 2.61 (SD = 1.08) for the goal "comfort with self-identity," a difference of .36 (Table 28).

The second two of these goals fall under the vector *Establishing Identity*. Perhaps this suggests that women perceive CMB participation more important to establishing their identity than men, possibly because men have already established their identity within the CMB. Women and men's scores differed by an average of .26 points across the six goals of this vector, which is higher than the average difference of .22 across all goals (Table 26). However, the difference in scores is even higher for the vectors *Managing Emotions* (.27) and *Mature Relationships* (.29). The trend here is that women do perceive CMB participation as more important to their development than men, with

the greatest difference in identity development and vectors that contribute to forming identity.

Table 26

Overall Participants' Mean Scores for Student Development Goals by Gender

Q	Development Goal	women *M*	men *M*	Mean Difference	*SD*
1	ability to make decisions	2.67	2.58	0.10	0.07
2	reduced need for reassurance	2.48	2.29	0.19	0.13
3	ability to think for myself	2.90	2.66	0.24	0.17
4	ability to meet deadlines	3.10	2.80	0.30	0.21
5	reduction of parental involvement	2.69	2.52	0.18	0.12
6	showing up on time	3.25	3.06	0.20	0.14
7	ability to organize a meeting	2.84	2.62	0.22	0.15
8	ability to solve problems	2.92	2.62	0.30	0.21
9	increase in social interaction	3.73	3.58	0.16	0.11
10	effectively communicate with others	3.37	3.14	0.23	0.16
11	improvement in musical ability	3.13	2.98	0.15	0.11
12	work successfully as a team	3.48	3.21	0.27	0.19
13	manage my time	3.48	3.21	0.27	0.19
14	humanize values and empathize	2.89	2.75	0.15	0.10
15	desire to engage in community service	2.57	2.25	0.32	0.23
16	desire to help others in need	2.73	2.52	0.21	0.15
17	commit to seeing a project to end	3.04	2.92	0.11	0.08
18	Defining your leadership style	3.13	3.00	0.13	0.09
19	creating a feeling of family	3.65	3.53	0.12	0.09
20	understand compliance with rules	2.98	2.83	0.16	0.11
21	comfort with experimentation	2.98	2.83	0.15	0.10

Q	Development Goal	women *M*	men *M*	Mean Difference	*SD*
22	understand my role in an organization	3.22	3.06	0.16	0.11
23	growth due to a disciplinary situation	2.93	2.52	0.41	0.29
24	comfort with self-identity	2.96	2.61	0.36	0.25
25	accepting your sexual orientation	1.99	1.75	0.23	0.17
26	ability to handle frustrating situations	3.08	2.74	0.34	0.24
27	ability to take criticism	3.14	2.94	0.20	0.14
28	accept others different from you	3.03	2.66	0.37	0.26
29	understand the politics of organization	3.12	2.91	0.20	0.14
	Mean Score	3.02	2.80	0.22	0.16

In contrast, men and women most agreed on the vector *Developing Purpose,* with an average difference of .13 points (Table 27). *Developing Purpose* includes the goals of defining leadership style, fostering a sense of family, and compliance with rules.

Table 27

Vector Mean Scores for Men and Women

Vector	women *M*	men *M*	*Mean Difference*
Autonomy	2.85	2.65	0.20
Developing Competence	3.35	3.12	0.23
Developing Integrity	2.73	2.51	0.22
Developing Purpose	3.20	3.07	0.13
Establishing Identity	2.82	2.55	0.27
Managing Emotions	3.11	2.84	0.27
Mature Relationships	3.07	2.79	0.28

Class Year

Perceptions of CMB importance to development goals were varied based on the class year of participants. In almost every category, First Year (n = 154) and Sophomore (n = 187) students reported lower scores than Junior (n =186), Senior (n =164), and Beyond Senior (n = 51) students. The mean score for all goals by these groups are: First Year (M = 2.83, SD = 1.00), Sophomore (M = 2.85, SD = 0.97), Junior (M = 2.98, SD = 0.98), Senior (M = 3.05, SD = 0.90), and Beyond Senior (M = 2.94, SD = 0.98) (Table 28).

I ran an analysis of variance test 29 times, one for each goal, to determine if there was any statistically significant difference in how participants from different class years reported goals. ANOVA showed that 13 of 29 goals showed statistical significance. First Year and Sophomore students reported the lowest scores in these 13 significant goals while Junior, Senior, and Beyond Senior students reported the highest. These 13 goals represent all seven vectors, so there is no defining vector characteristic as to why these goals showed a statistically significant difference between groups. Of those, the goals with the highest overall mean scores were "creating a feeling of family" (M = 3.61, SD = 0.72), "work successfully as a team" (M = 3.37, SD = 0.82), "manage my time" (M = 3.29, SD = 0.89), "and effectively communicate with others" (M = 3.28, SD = 0.85). Students rated these goals with the Likert-type designation "moderate influence," but also showed, through an ANOVA test, that they differ in how they rate these goals based on class year.

Table 28

Overall Participants' Mean Scores for Student Development Goals by Class Level

Q	Development Goal	First Year		Sophomore		Junior		Senior		Beyond Senior		*F*	*p*
		M	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***		
1	ability to make decisions	2.42	0.91	2.48	0.89	2.69	1.00	2.88	0.85	2.80	1.00	7.05	< .001**
2	reduced need for reassurance	2.36	0.98	2.33	0.97	2.42	1.00	2.46	1.04	2.56	1.05	0.79	0.531
3	ability to think for myself	2.63	1.04	2.64	0.97	2.90	0.99	2.96	0.96	3.00	1.01	4.39	0.002**
4	ability to meet deadlines	2.93	1.05	2.85	1.02	3.08	0.96	3.05	0.96	3.06	0.93	1.68	0.153
5	reduction of parental involvement	2.54	1.17	2.63	1.10	2.65	1.16	2.69	1.17	2.43	1.17	0.63	0.641
6	showing up on time	3.06	1.09	3.15	1.01	3.16	1.09	3.29	0.93	3.29	0.94	1.30	0.267
7	ability to organize a meeting	2.63	1.05	2.57	1.10	2.79	1.03	2.96	0.98	2.90	1.04	3.78	0.005**
8	ability to solve problems	2.64	1.00	2.70	0.96	2.81	1.00	3.00	0.97	2.96	1.02	3.64	0.006**
9	increase in social interaction	3.62	0.71	3.61	0.66	3.68	0.67	3.77	0.53	3.76	0.51	1.97	0.098
10	effectively communicate with others	3.18	0.90	3.12	0.90	3.32	0.83	3.49	0.72	3.37	0.85	5.24	< .001**
11	improvement in musical ability	3.03	1.05	3.03	1.01	3.13	0.99	3.13	0.96	3.02	1.03	0.45	0.769
12	work successfully as a team	3.28	0.87	3.25	0.89	3.39	0.85	3.56	0.66	3.33	0.77	3.87	0.004**
13	manage my time	3.22	0.92	3.23	0.88	3.25	0.96	3.50	0.75	3.20	0.98	3.12	0.015*
14	humanize values and empathize	2.72	0.98	2.69	0.93	2.97	0.95	2.95	0.89	2.96	0.90	3.42	0.009**
15	desire to engage in community service	2.42	1.07	2.46	1.11	2.42	1.11	2.42	1.07	2.55	1.03	0.16	0.956
16	desire to help others in need	2.53	1.04	2.60	1.04	2.70	1.05	2.76	0.95	2.58	1.13	1.28	0.277
17	commit to seeing a project to end	2.94	1.09	2.93	0.99	3.11	1.01	3.02	0.94	3.02	1.19	0.85	0.494
18	defining your leadership style	2.94	1.03	2.86	1.04	3.16	0.95	3.29	0.93	3.25	1.09	5.64	< .001**
19	creating a feeling of family	3.56	0.78	3.49	0.78	3.61	0.75	3.78	0.53	3.69	0.68	4.19	0.002**
20	understand compliance with rules	2.78	1.02	2.90	0.98	3.00	1.00	2.98	0.97	2.94	1.05	1.19	0.313
21	comfort with experimentation	2.99	0.92	2.87	0.91	2.98	0.95	2.94	0.90	2.67	0.97	1.47	0.209
22	understand my role in an organization	3.08	0.89	3.09	0.91	3.26	0.87	3.23	0.86	3.02	0.95	1.76	0.134

Q	Development Goal	First Year		Sophomore		Junior		Senior		Beyond Senior		*F*	*p*
		M	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***		
23	growth due to a disciplinary situation	2.69	1.15	2.75	1.13	2.89	1.12	2.82	1.04	2.52	1.11	1.24	0.292
24	comfort with self-identity	2.61	1.06	2.71	0.97	2.90	1.04	3.04	0.94	2.89	1.09	4.47	0.001**
25	accepting your sexual orientation	1.90	1.18	1.94	1.12	1.91	1.18	1.93	1.13	1.71	1.09	0.32	0.862
26	ability to handle frustrating situations	2.74	0.97	2.79	0.96	3.05	0.92	3.18	0.82	3.04	0.89	6.66	< .001**
27	ability to take criticism	3.01	0.95	3.01	0.93	3.16	0.91	3.14	0.86	2.94	0.90	1.27	0.282
28	accept others different from you	2.78	1.09	2.94	1.01	2.88	1.09	2.94	1.06	2.88	1.09	0.59	0.667
29	understand the politics of organization	2.91	1.03	2.92	0.97	3.10	0.94	3.24	0.82	2.88	0.92	3.99	0.003**
	AVERAGE	2.83	1.00	2.85	0.97	2.98	0.98	3.05	0.90	2.94	0.98		
	Participants *n*	**154**		**187**		**186**		**174**		**51**			

In contrast, the statistically significant goals with the lowest mean scores are "ability to make decisions" (M = 2.64, SD = 0.94), "ability to organize a meeting" (M = 2.75, SD = 1.05), "ability to think for myself" (M = 2.8, SD = 1.00), and "ability to solve problems" (M = 2.8, SD = 0.99). Students rated these goals with the Likert-type designation "some influence," but also showed, through an ANOVA test, that they differ in how they rate these goals based on class year.

Size of Band Staff

Perceptions of CMB importance to development goals were varied based on the self-reported number of staff who works with their band. One hypothesis is that more instructional staff creates fewer opportunities for students to lead and have developmental experiences. However, the mean scores across all goals were higher for students whose bands had more staff members. I divided participant responses into categories for "low 0 to 3" (n = 261), "medium 4 to 6" (n = 296), and "high 7 to 20" (n = 194) staff members. 17 students preferred to not answer. The overall mean score of each group was: "low" (M = 2.89, SD = 0.36), "medium" (M = 2.93, SD = 0.35), and "high" (M = 3.0, SD = 0.39) (Table 29). There was minimal difference in how the three groups rated development goals. The goal "improvement in musical ability" (M = 3.08, *SD = 0.19)* under the vector *Developing Competency*, reported the largest standard deviation in its mean score.

Table 29

Overall Participants' Mean Scores for Student Development Goals by Staff Size

Q	Development Goal	0–3 low	4–6 medium	7–20 high	Total	*SD*
		M	*M*	*M*	*M*	
1	ability to make decisions	2.62	2.66	2.64	2.64	0.02
2	reduced need for reassurance	2.45	2.37	2.36	2.39	0.05
3	ability to think for myself	2.84	2.77	2.82	2.81	0.04
4	ability to meet deadlines	2.94	2.97	3.06	2.99	0.07
5	reduction of parental involvement	2.52	2.69	2.64	2.61	0.09
6	showing up on time	3.09	3.25	3.18	3.17	0.08
7	ability to organize a meeting	2.80	2.70	2.80	2.76	0.06
8	ability to solve problems	2.69	2.80	2.94	2.81	0.13
9	increase in social interaction	3.68	3.60	3.75	3.68	0.07
10	effectively communicate with others	3.24	3.23	3.41	3.29	0.10
11	improvement in musical ability	2.88	3.10	3.27	3.08	0.19
12	work successfully as a team	3.29	3.35	3.50	3.38	0.11
13	manage my time	3.25	3.29	3.37	3.30	0.06
14	humanize values and empathize	2.72	2.88	2.92	2.84	0.11
15	desire to engage in community service	2.34	2.48	2.54	2.46	0.10
16	desire to help others in need	2.54	2.70	2.71	2.65	0.09
17	commit to seeing a project to end	2.96	3.00	3.05	3.00	0.04
18	defining your leadership style	3.06	3.02	3.19	3.09	0.09
19	creating a feeling of family	3.59	3.59	3.67	3.62	0.05
20	understand compliance with rules	2.85	2.95	2.98	2.93	0.07
21	comfort with experimentation	2.94	2.91	2.89	2.91	0.03
22	understand my role in an organization	3.13	3.16	3.20	3.16	0.03
23	growth due to a disciplinary situation	2.71	2.78	2.83	2.77	0.06
24	comfort with self-identity	2.80	2.81	2.82	2.81	0.01
25	accepting your sexual orientation	1.94	1.92	1.83	1.89	0.06
26	ability to handle frustrating situations	2.88	2.87	3.10	2.95	0.13
27	ability to take criticism	2.96	3.09	3.15	3.07	0.10
28	accept others different from you	2.96	3.09	3.15	3.07	0.10
29	understand the politics of organization	3.02	2.99	3.13	3.04	0.07
	Mean Score	2.89	2.93	3.00		
	Participants	**261**	**296**	**194**		

One interesting trend appeared from the scores for this goal. Students from bands with fewer staff reported a lower score for "improvement in their musical ability" compared to students with more staff. In fact, the scores steadily rose across the three groups: low group (M = 2.88, SD = 1.02), medium group (M = 3.10, SD = 1.01) and high group (M = 3.27, SD = 0.94). This suggests that students with a larger instructional staff perceive that their musical ability is more improved than those with a smaller staff.

Goals with the highest reported mean scores with the lowest standard deviation are "comfort with experimentation" (M = 2.91, SD = 0.03) and "understanding my role in organization" (M = 3.16, SD = 0.03) (Table 30). Both goals are about social interaction under the vector *Establishing Identity*. It seems logical that participants would most agree in these areas, as staff size would probably cause minimal difference in the perception of these goals.

Table 30

High and Low Participants' Mean Scores for Student Development Goals by Staff Size

Q	Development Goal	0–3 low	4–6 medium	7–20 high	Total	*SD*
		M	*M*	*M*	*M*	
11	improvement in musical ability	2.88	3.10	3.27	3.08	0.19
8	ability to solve problems	2.69	2.80	2.94	2.81	0.13
26	ability to handle frustrating situations	2.88	2.87	3.10	2.95	0.13
21	comfort with experimentation	2.94	2.91	2.89	2.91	0.03
22	understand my role in an organization	3.13	3.16	3.20	3.16	0.03
1	ability to make decisions	2.62	2.66	2.64	2.64	0.02
24	comfort with self-identity	2.80	2.81	2.82	2.81	0.01

Ratio of Staff and Student Rehearsal

Perceptions of CMB importance to development goals were varied based the amount of instruction and rehearsal led by students versus staff. I asked participants to provide their view of the ratio of rehearsal leadership between staff and students. I surveyed this to explore the assumption that students with more involvement would report higher scores if given more opportunities to lead and instruct. To help generalize their responses, five choices were provided:

1. 100% Staff
2. 75% Staff / 25% Students
3. 50% Staff / 50% Students
4. 25% Staff / 75% Students
5. 100% Students

The largest number of participants (n = 367) reported that a combination 75% Staff to 25% Students rehearses their CMBs. Participant responses verified that most bands are rehearsed by a combination of staff and students, and the fewest are rehearsed by 100% Staff or 100% Students (Table 31).

Table 31

Overall Participants' Mean Scores by Ratio of Staff to Students Rehearsal Responsibility

Q	Development Goal	100% Staff	75/25	50/50	25/75	100% Students	*SD*
		M	***M***	***M***	***M***	***M***	
1	ability to make decisions	2.51	2.60	2.65	2.83	2.57	0.12
2	reduced need for reassurance	2.16	2.40	2.48	2.46	2.43	0.13
3	ability to think for myself	2.63	2.81	2.90	2.87	2.55	0.15
4	ability to meet deadlines	2.85	2.99	3.01	3.12	2.70	0.16
5	reduction of parental involvement	2.47	2.64	2.70	2.61	2.37	0.14
6	showing up on time	3.05	3.28	3.11	3.21	2.64	0.25
7	ability to organize a meeting	2.57	2.71	2.79	2.95	2.80	0.14
8	ability to solve problems	2.55	2.82	2.83	2.93	2.52	0.18
9	increase in social interaction	3.64	3.66	3.71	3.71	3.56	0.06
10	effectively communicate with others	3.19	3.31	3.34	3.23	3.09	0.10
11	improvement in musical ability	3.05	3.13	3.13	2.97	2.55	0.24
12	work successfully as a team	3.20	3.40	3.40	3.43	3.11	0.14
13	manage my time	3.18	3.31	3.36	3.32	2.98	0.16
14	humanize values and empathize	2.65	2.85	2.94	2.91	2.51	0.19
15	desire to engage in community service	2.36	2.42	2.57	2.50	2.07	0.19
16	desire to help others in need	2.47	2.64	2.76	2.71	2.36	0.17
17	commit to seeing a project to end	2.91	2.97	3.10	3.08	2.80	0.13
18	defining your leadership style	3.01	3.03	3.10	3.19	3.07	0.07
19	creating a feeling of family	3.57	3.62	3.57	3.65	3.60	0.03
20	understand compliance with rules	2.96	2.92	2.93	2.92	2.64	0.13
21	comfort with experimentation	2.69	2.92	2.91	3.01	3.02	0.13
22	understand my role in an organization	2.96	3.18	3.21	3.13	3.07	0.10
23	growth due to a disciplinary situation	2.44	2.77	2.92	2.85	2.47	0.22
24	comfort with self-identity	2.51	2.85	2.85	2.99	2.51	0.22
25	accepting your sexual orientation	1.68	1.86	2.05	1.99	1.82	0.15
26	ability to handle frustrating situations	2.83	2.94	3.00	3.09	2.51	0.22
27	ability to take criticism	2.91	3.06	3.14	3.15	2.76	0.17
28	accept others different from you	2.75	2.86	2.94	3.02	2.58	0.17
29	understand the politics of organization	2.82	3.04	3.03	3.11	3.13	0.12
	Mean Score	**2.78**	**2.93**	**2.98**	**3.00**	**2.72**	
	Participants	**84**	**367**	**143**	**122**	**45**	

Development goals whose mean scores had the largest standard deviation, and the most variation between the responses of all five groups were: "showing up on time" (M = 2.76, SD = 0.25), "improvement in musical ability" (M = 2.97, SD = 0.24), "ability to handle frustrating situations" (M = 2.87, SD = 0.22), "comfort with self-identity" (M = 2.74, SD = 0.22), and "growth due to a disciplinary situation" (M = 2.69, SD = 0.22) (Table 32). For these five development goals, groups with rehearsal responsibilities shared by staff and students reported the highest mean scores. In contrast, participants from groups rehearsed 100% by students reported the lowest scores (Table 32).

Table 32

Mean Scores for Ratio of Staff to Students Rehearsal with Largest Standard Deviation

Q	Development Goal	100% Staff	75/25	50/50	25/75	100% Students	*SD*
		M	***M***	***M***	***M***	***M***	
6	showing up on time	3.05	3.28	3.11	3.21	2.64	0.25
11	improvement in musical ability	3.05	3.13	3.13	2.97	2.55	0.24
23	growth due to a disciplinary situation	2.44	2.77	2.92	2.85	2.47	0.22
24	comfort with self-identity	2.51	2.85	2.85	2.99	2.51	0.22
26	ability to handle frustrating situations	2.83	2.94	3.00	3.09	2.51	0.22

Participants were in most agreement, reporting the mean scores with lowest standard deviation, on the goals "defining your leadership style" (M = 3.08, SD = 0.07), "increase in social interaction" (M = 3.66, SD = 0.06), and "creating a feeling of family" (M = 3.60, SD = 0.03) (Table 33). Also, all the mean scores for these three goals were above 3.0, indicating that participants also perceive CMB as having "moderate influence"

on these development goals.

Table 33

Mean Scores for Ratio of Staff to Students Rehearsal with Lowest Standard Deviation

Q	Development Goal	100% Staff	75/25	50/50	25/75	100% Students	*SD*
		M	***M***	***M***	***M***	***M***	
9	increase in social interaction	3.64	3.66	3.71	3.71	3.56	0.06
18	defining your leadership style	3.01	3.03	3.10	3.19	3.07	0.07
19	creating a feeling of family	3.57	3.62	3.57	3.65	3.60	0.03

Agreement on the goals "increase in social interaction" and "creating a feeling of family" is likely due to the CMB experience that requires groups of peers working together toward a common goal. These two goals do not require rehearsal leadership opportunities for students to feel they are important, but they lend themselves to the experience of belonging to a group. Perhaps this is accounts for the agreement on these two goals among all five groups.

Number of Shows Prepared

Perceptions of CMB importance to development goals varied based on the number of shows prepared by each participant's CMB. College marching bands usually prepare multiple shows per year, as indicated by the responses, but there are some bands that prepare only one or two shows per season in exhibition style. The exhibition-style bands tend to function more like competitive high school bands or drum and bugle corps, learning a difficult show that focus on perfection of small details. The number of shows can change how a student views these goals through these different experiences. The high

group included students from bands that performed five or more shows per year while the low group represents four or less shows per year.

With the analysis focusing on two categories, I included both standard deviation and the difference between the two scores (Table 34). Participants reported the overall mean score for the high group ($M = 2.94$, $SD = 0.35$) slightly better than the low group ($M = 2.88$, $SD = 0.36$). The high group reported higher scores in 22 of 29 goals.

Table 34

Overall Participants' Mean Scores for Goals by Number of Shows Prepared

Q	Development Goal	0–4 low	5–10 high	Mean Differ-ence	*SD*
		M	*M*		
1	ability to make decisions	2.67	2.62	0.05	0.03
2	reduced need for reassurance	2.30	2.45	0.15	0.10
3	ability to think for myself	2.79	2.81	0.01	0.01
4	ability to meet deadlines	2.87	3.04	0.16	0.12
5	reduction of parental involvement	2.56	2.64	0.08	0.06
6	showing up on time	3.17	3.18	0.01	0.00
7	ability to organize a meeting	2.71	2.77	0.06	0.04
8	ability to solve problems	2.79	2.81	0.02	0.01
9	increase in social interaction	3.58	3.72	0.13	0.09
10	effectively communicate with others	3.21	3.31	0.10	0.07
11	improvement in musical ability	3.12	3.04	0.09	0.06
12	work successfully as a team	3.32	3.39	0.08	0.05
13	manage my time	3.23	3.32	0.10	0.07
14	humanize values and empathize	2.84	2.83	0.01	0.01
15	desire to engage in community service	2.46	2.43	0.03	0.02

Q	Development Goal	0–4 low	5–10 high	Mean Differ-ence	*SD*
		M	*M*		
16	desire to help others in need	2.65	2.64	0.01	0.01
17	commit to seeing a project to end	2.97	3.01	0.04	0.03
18	defining your leadership style	3.04	3.09	0.05	0.04
19	creating a feeling of family	3.54	3.64	0.10	0.07
20	understand compliance with rules	2.92	2.91	0.01	0.01
21	comfort with experimentation	2.89	2.93	0.04	0.03
22	understand my role in an organization	3.06	3.20	0.14	0.10
23	growth due to a disciplinary situation	2.73	2.78	0.04	0.03
24	comfort with self-identity	2.71	2.87	0.16	0.11
25	accepting your sexual orientation	1.83	1.94	0.10	0.07
26	ability to handle frustrating situations	2.88	2.98	0.10	0.07
27	ability to take criticism	3.02	3.08	0.07	0.05
28	accept others different from you	2.89	2.87	0.03	0.02
29	understand the politics of organization	2.91	3.10	0.19	0.13
	Mean Score	**2.88**	**2.94**	**0.06**	**0.05**
	Participants	**262**	**506**		

The two groups most differed on their mean score of the goal to “understand the politics of organization” with a gap of .19 (Table 35). The next two goals with the largest gaps are “comfort with self-identity” (.16) and “ability to meet deadlines” (.16). In all of these, the high group reported the higher score. It is possible that students from bands that perform less shows are more focused on the musical and performance aspects of CMB participation, as opposed to focus on development goals that go beyond the musical

aspect. In contrast to the trend, the low group reported the higher score on the goal "improvement in musical ability," with the largest gap (.09). This goal being a purely musical goal, perhaps lends support to this notion.

The high and low groups most agreed on three goals, each with a .01 difference in scores: showing up on time, humanize and empathize values, and desire to help others in need. These goals seem like they would be unaffected by the different type of band based on the number of shows. The results suggest that participants rated these goals independent of band typology.

Table 35

Highest and Largest Gap in Mean Scores for Number of Shows Prepared

Q	Development Goal	0–4 low	5–10 high	Mean Difference	*SD*
		M	*M*		
29	understand the politics of organization	2.91	3.10	0.19	0.13
4	ability to meet deadlines	2.87	3.04	0.16	0.12
24	comfort with self-identity	2.71	2.87	0.16	0.11
3	ability to think for myself	2.79	2.81	0.01	0.01
6	showing up on time	3.17	3.18	0.01	0.00
14	humanize values and empathize	2.84	2.83	0.01	0.01
16	desire to help others in need	2.65	2.64	0.01	0.01
20	understand compliance with rules	2.92	2.91	0.01	0.01

The initial research question asked how students from different demographic backgrounds perceived the importance of CMB participation on these development goals. I have presented five different demographic situations: Gender, Class Year, Size of Band

Staff, Ratio of Staff to Students Rehearsal Responsibility, and Number of Shows Prepared in One Season. The first two listed, Gender and Class Year, are common pieces of demographic information that researchers utilized in previous studies to explore how men and women approach development and achieve development goals over time. The last three demographics, Size of Band Staff, Ratio of Staff to Students Rehearsal Responsibility, and Number of Shows Prepared in One Season, are specific to the CMB as a music organization. I utilized these to gain a description of the type of CMB experience the participant is receiving with relation to student development.

The Size of Staff and Ratio of Staff to Student Rehearsal Responsibility both helped to describe the amount and type of active teaching or leadership opportunities available to the participant. I used the Number of Shows Prepared to describe whether a participant's CMB focused on perfection of small details or utilized a broad approach. A broad approach sometimes allows students to experience student development aspects of CMB outside of the musical and technical aspects. This piece of demographic information does not allow for judgments to be made on this topic, but it does provide a starting point for determining the relevance of this demographic detail.

This descriptive analysis, based on these demographic details, provided an answer to the research question by explaining how these demographic groups perceived the importance of CMB participation to the development goals. To generalize on some observed tendencies, women reported higher scores than men; older students reported higher scores than younger; students with a larger band staff reported slightly higher scores; students from bands with a combination of staff and student rehearsal

responsibilities reported higher scores than those whose bands utilize only staff or only students; and students whose bands prepare five or more shows each season reported higher scores than those preparing four or less.

CHAPTER 5: SUMMARY AND CONCLUSIONS

This purpose of this study was to determine how students perceive the importance of college marching band participation to student development. Even though researchers have extensively studied the impact of extracurricular activities on student development, the connections between student development and college marching band have not received specific examination. The goal of this study was to help broaden the understanding of the relationship between CMB participation and student development. Specific research questions included: (1) Utilizing Chickering's Seven Vectors as a framework, how do students respond to the perceived importance of development goals through college marching band participation? (2) Do students who hold leadership positions in college marching band differ from those who do not in relation to perceived importance of development goals? (3) Do students with different numbers of extracurricular activities outside of college marching band differ in relation to perceived importance of development goals? (4) How do college marching band students from different demographic backgrounds respond to the perceived importance of development goals? Through this study, I sought to determine how CMB participation contributes to student identity development.

Psychosocial Development and the College Marching Band

For more than 50 years, the psychosocial development of students through college experience has been a significant area of research. Chickering (1969) was one of the first researchers to take previous psychosocial models, ones that were applied to child development, and apply them to 18- to 24-year-old students in a university setting.

The word *psychosocial* is the combination of two ideas: psychological development and social influences. *Psychosocial development* explains how a person's psychological self develops through environmental or social influences. It is a useful framework for evaluating student development in college because the social experiences of that culture are prominent features of college student life. For most students, the college environment is a significant deviation from the familial environment and local community they have experienced for the previous 18 or so years of their development. No longer are parents the strongest guiding force in a child's life. Now the college community of peers, professors, staff, administrators, and alumni are primarily influencing the lives of college students.

The college marching band is one of those new experiences for college students that act as the social environment for influencing development. In high school marching band, parents, teachers, and the local community chaperoned and supervised students and their peers. The college marching band environment moves away from that model. Parental involvement is significantly reduced as student peers and band staff become the prominent conduit for guiding student development in areas beyond the technical aspects of marching and playing the notes. With environment playing an important role in college marching band, psychosocial evaluation is a useful framework for investigating the development that occurs.

Theoretical Framework

I used the Seven Vectors of Student Development (Chickering & Reisser, 1993) to define and categorize student development goals. This framework also inspired the

creation of development goals specific to the college marching band experience. The Seven Vectors are general in nature, and in some situations overlap each other. The earlier psychosocial development work of Erik Erikson (1958, 1968) utilized a similar set of goals, but called them "crises," and asserted that development occurs as subjects progress through each of these sequentially. Chickering's experience with the Seven Vectors differs from Erikson on the need for sequential progress, allowing for progress through the vectors at different times in varying order, with the experiences in some vectors contributing to the experiences in others (Chickering & Reisser, 1993). I selected the Seven Vectors Theory as a framework because it provided categorical definitions for the expectations of student development that can be broadly applied with overlap to different college types of college experiences.

Survey Instrument

Researchers previously created and administered several surveys instruments to quantify student development based on the Seven Vectors including: the Student Developmental Life Task Inventory (Winston, 1990), the Iowa Student Development Inventory (Hood & Jackson, 1985), the National Survey of Student Engagement (National Survey of Student Engagement, 2001), and the College Student Experiences Questionnaire (Pace & Kuh, 1998). All of these are suitable instruments for investigating student perceptions of their own development. However, they did not seem like the right instrument for this study because their questions are extensive and not specific to CMB. To answer the questions, I created a shorter CMB specific survey with 29 goals and categorized them under the Seven Vectors. This is a lower number of questions compared

to that of previously mentioned standardized surveys, but it seemed that fewer questions would facilitate completion of the survey and sufficiently answer the research questions of this study. I distributed this survey to CMB directors who then distributed the survey to their students, requesting voluntary participation. There were 768 responses recorded in a one-month period. The findings verified some results of previous studies, but also provided new insight into the student perceptions of their development through CMB participation.

Research Questions

I asked the first research question to determine how students respond to the perceived importance of college marching band participation to development goals and the Seven Vectors of Development. Although research has shown that certain vectors rank more important than others, Chickering and Reisser (1993) also asserted that students tend to move through the vectors in a prescribed order. In contrast, Foubert et al. (2005) suggested that the vectors are not always experienced sequentially. Experiencing the vectors in sequential versus non-sequential order was not a goal of this study, but we can infer from the results that there may be support for this notion. Results indicated that some of the later vectors, in Chickering and Reisser's order, reported higher scores than some of the earlier ones.

Previous research on the seven vectors has also reported certain vectors as more important than others to college student psychosocial development. Healy (2016) showed support for the importance of *Developing Competence, Developing Purpose, and Mature Relationships* in that order. In contrast, Richardson (2012) showed less support for

Developing Competence. Young (2001) suggested that CMB students experience *Mature Relationships, Establishing Identity, and Developing Purpose* regularly. Elliott (2009) reported *Developing Purpose* and *Autonomy* as showing higher levels of growth, confirmed by Winston (1990) with *Developing Purpose* as the highest. The results of this study show the most support for Healy's (2016) study.

I reported that participants ranked *Developing Competence* and *Developing Purpose* the highest, *Managing Emotions* and *Mature Relationships* in the middle, and *Autonomy*, *Establishing Identity*, and *Developing Identity* the lowest. It is worth noting that all seven vectors contained at least one goal each that scored above 3.0 on a four-point scale. This advocates for the perceived ability of CMB participation to have influence on all areas of psychosocial development as prescribed in Chickering's Seven Vectors.

Participants perceived the vector *Developing Competence* as most important through CMB participation. It focuses on developing intellectual, physical, and interpersonal competencies (Chickering & Reisser, 1993). *Developing Competence* is also the first in Chickering's prescribed order of the Seven Vectors, possibly lending itself to being higher rated. The developmental goals listed under *Developing Competence* are somewhat basic and could overlap with other vectors, but they set up the foundation for progression through subsequent vectors.

In the vector *Developing Purpose*, ranked second in this study, students experience a strong commitment to objectives, regardless of obstacles, and a commitment to purpose for one's self (Chickering & Reisser, 1993). Within the context of CMB

participation, this includes goals like committing to long-term projects, defining personal leadership style, creating a feeling of belonging for the group, and compliance with rules. *Developing Purpose* is usually experienced sixth, which is significantly later in the progression through the vectors (Chickering & Reisser, 1993). Given that CMB participants rated it second, this suggests that it may be experienced earlier and more frequently than reported by Chickering and Reisser (1993). This suggests support for the results of Foubert et al. (2005), who believe that Seven Vectors are not experienced sequentially.

Participants rated *Managing Emotions* and *Mature Relationships* close to 3.0, which is in the middle in terms of perceived vector importance to CMB participation. Previous research indicated support for these results (Elliott, 2009; Healy, 2016; Stanford, 1990; Williamson, 2009; Winston, 1990; Young, 2001). This suggests that CMB students perceive the importance of these vectors similar to college students in general. There was nothing particularly surprising by these results because I expected that these two vectors would rank in the middle based on previous research.

The three lowest rated vectors were *Autonomy*, *Establishing Identity*, and *Developing Integrity*. Most previous research using the SDTLI and other standard survey tests does not explore these particular vectors with *Autonomy* being the exception. Elliott (2009) and Winston (1990) reported that increased involvement corresponded to higher levels of *Autonomy*, but still had them ranked lower than other vectors polled. The results of this study reported *Autonomy* as the fifth most important vector, with a mean score of 2.77 ($SD = 0.54$) out of 4.0. This was one of the more surprising results because previous

studies reported that *Autonomy* through extracurricular participation does receive high scores (Elliott 2009; Winston, 1990). *Autonomy* includes goals associated with taking responsibility for oneself and understanding how one is interdependent with the world around them (Chickering & Reisser, 1993). These are goals that would seem to be prominently developed through CMB participation due to the organization's need for students to be personally responsible for themselves. Despite expectations, focusing on the CMB, as the type of activity, did not place a higher value on the importance of *Autonomy* in comparison to previous studies.

Establishing Identity and *Developing Integrity* are supposed to occur later in the progression of how students experience the seven vectors. In this study, they received the lowest scores of all vectors. Given that previous surveys rarely focus on these two vectors, comparison to previous research was difficult (Winston, 1990). *Establishing Identity* contains goals that rely on experiencing previous vectors and becoming comfortable with one's own appearance and personality (Chickering & Reisser, 1993). Perhaps CMB students reported the lowest mean scores for this vector because some aspects of CMB participation may constrain their own self-identity. CMBs tend to be very hierarchical, often requiring younger students to "jump through hoops" to gain acceptance and conform to the norms of the group. This is why the hazing culture of CMBs and ethical leadership have been prevalent concerns in recent years (Gibbs, 2015).

Similarly, *Developing Integrity* is the last vector that students usually experience, resulting from progress through the previous vectors of *Establishing Identity* and *Developing Purpose.* The vector *Developing Integrity* involves a shift from literal

interpretation of rules to a relative view that understands the purpose and reason for rules (Chickering & Reisser, 1993). It also allows for the ability to humanize values allowing for socially responsible behavior. When trying to develop good leaders, a focus on the end goal of *Developing Integrity* seems integral. However, its low ranking displays a need for further investigation into how CMB participation can increase fostering the vector of *Developing Integrity*. Given that participants also ranked *Establishing Identity* low, which leads to *Developing Integrity*, perhaps strengthening the first will subsequently increase development in this final vector.

The results also provided a picture of how participants perceive individual development goals. Out of 29 development goals selected for this survey, some strongly resonated with CMB students. Goals connected to the social aspects and the family atmosphere of CMB participation resonated the strongest, followed by goals that centered on personal responsibility. The lowest reported goals were those having to do with establishing autonomy and the desire to help others. Some goals may have received lower scores because they represent situations that may not be typically associated with CMB experiences. For example, "improvement in musical ability" is something typically associated with CMB participation, but "accepting your sexual orientation" may not be.

Participants ranked the goal "accepting your sexual orientation" lowest of all 29 goals. In my experience, the atmosphere of CMB can be one that is very accepting to all types of people. However, a structured hierarchy is usually present in college marching bands that require conformity to the group. This occurs through auditions and training for new members. In order to become part of the group, auditioning students usually must

conform. Perhaps this is where goals like “accepting your sexual orientation” become lost. Despite participants ranking this goal low, it is possible that CMB participation still acts as an environmental factor on this type of development goal.

Three goals centered on parental involvement and autonomy also ranked very low: reduced need for reassurance, reduction of parental involvement, and ability to make decisions. Elliott (2009) and Winston (1990) both found experiences of *Autonomy* to be lower rated, but these particular goals are ones that I believed would resonate with CMB participants as they are usually required as part of CMB participation. CMB participation differs from high school marching band where band boosters and parents are around for continuous support. These goals expect students to become independent of both their parents and past influencers, with a new focus on learning do things for themselves. There is no clear explanation for why CMB students ranked these low, but perhaps it points to need for more research on development of autonomy.

CMB participation often has a service component that students can use as an outlet for the desire to help others. However, the goals “desire to help others in need” and “desire to engage in community service” also reported low scores, leaving a sense of puzzlement on how CMB participation contributes to developing student integrity. Many CMB organizations have a service fraternity or sorority that offer opportunities for community service and helping others. However, not all members of a CMB participate in service organizations because community service is not typically the top reason for CMB participation given that its primary goal to perform music.

As mentioned earlier, goals connected with social aspects and the family

atmosphere of CMB participation resonated the strongest among participants. The top-rated goals were: increase in social interaction; creating a feeling of family; and work successfully as a team. The strong resonance of these goals with CMB students suggests that CMBs foster development in these areas that fall under the vectors of *Developing Competence* and *Developing Purpose*. Additionally, 11 of 29 goals had mean scores above 3.0, providing positive affirmation about the role of CMB participation in student development. Conversely, goals with the lowest mean scores create concern, leading to wonderment about how the CMB experience can improve to better address the lowest ranked developmental goals.

I posed the second research question to determine how students who hold leadership positions in college marching band differ from those who do not in relation to perceived importance of the development goals. Previous research on leadership revealed that holding leadership positions correlates with positive growth in several areas including psychosocial development (Cooper et al., 1994; Cress et al., 2001; Skeat, 2000; Warfield, 2013; Wilson, 1999). I focused on leadership to see how it applied to CMB participation and hypothesized the results of this study would reveal similar findings.

I ran an unpaired *t-test* 29 times, one for each goal, to compare the mean scores for leaders versus non-leaders on each development goal and look for any goals that showed a statistically significant result. Utilizing $p < 0.05$, 15 of 29 goals showed statistical significance for the idea that holding a leadership position does change how participants report CMB importance to those goals. In all 15 goals, leaders reported higher mean scores than non-leaders. The statistically significant goals that showed the

largest differences in mean scores were: defining your leadership style; ability to organize a meeting; ability to solve problems; and effectively communicate with others. Being a leader appeared to positively influence perceptions of CMB participation's importance to these goals. This seems logical in that non-leaders probably do not have opportunities to experience these goals for themselves.

In contrast, leaders and non-leaders reported no difference, or equal mean scores, for the goals "showing up on time" and "comfort with experimentation." All CMB students can experience these two goals, regardless of leadership, which possibly explains why leaders and non-leaders do not differ on how they rate them. Leaders rated the importance of all developmental goals higher than non-leaders except for "improving musical ability" and "accepting your sexual orientation," although a *t*-test showed no statistical significance in how these groups differed based on leadership. Non-leaders likely ranked "improving musical ability" higher than leaders because they are often younger members and may have more capacity for musical growth. Also, given that most leaders indicated there were an upperclassman, they may have already experienced musical growth and accepting their sexual orientation. Despite non-leaders ranking these two goals high, leaders overwhelmingly ranked all other development goals higher than non-leaders. This suggests support for Astin's (1984) Theory of Involvement, indicating that the more one puts into an activity or class work, the more reward that one receives from it.

I utilized the third question to explore how students with varying numbers of extracurricular activities differ in their views of CMB importance to these development

goals. Participants self-classified themselves into one of five groups: zero, one, two, three, and four or more activities outside of CMB. Students with more extracurricular activities ranked the importance of CMB participation on development goals higher than those with no activities outside of CMB. They reported the highest mean scores when involved in one or more activities outside of CMB, and the lowest when involved in no other activities or the "zero" activity group. This suggests that involvement in one or more activities outside of CMB improved the way students perceived their development while participation in no additional activities lowered that perception. Perhaps participating in a variety of extracurricular activities provides different experiences that can help clarify students' feelings on their CMB experience. This also provides support for Astin's (1984) Theory of Involvement, showing that more involvement and experience yields higher results.

A one-way Analysis of Variance revealed statistical significance, at the $p < 0.05$ level, for the difference between groups in the following three goals: manage my time; increase in social interaction; and ability to solve problems. These goals appear to be things that a student would experience often with increased extracurricular involvement. For example, if a student participates in a larger number of activities they would apply more focus to time management, would experience increased social interaction, and have more opportunities to solve problems within those activities. Based on the statistical significance of these goals, the number of extracurricular activities outside of band affected how students rated these specific development goals.

Extracurricular involvement is an important factor because more of it increases

the number of development experiences. Therefore, previous studies along with Astin's (1985) research and theory focused on this question and reported that an increase in activities does generate better student development results (Abrahamowicz, 1985; Astin, 1985, 1991; Cooper et al., 1994; Elliott, 2009; Foubert & Grainger, 2006; Foubert et al., 2005; Healy, 2016; Kuh, 1991; Wilson, 1999). However, there is a point where too many activities can hinder academic performance (Anaya, 1996; Pascarella & Terenzini, 2005; Zacherman et al, 2014). Zacherman and Foubert (2014), asserted that more than 10 hours of extracurricular activities per week hinders student development, supported by Pascarella and Terenzini (2005). The results suggested that the number of extracurricular activities did influence how students perceived their development and that they reported lower scores when participating in zero activities outside of marching band. However, participants reported the highest scores in the group that had one activity outside of marching band, perhaps lending support to the studies that assert a certain number of extracurricular activities or amount of involvement generates the best results.

I asked the fourth research question to assess how CMB students from different demographic backgrounds respond to the perceived importance of CMB participation on development goals. In reviewing the responses based on different demographics, I observed a difference based on self-reported gender. Women had higher mean scores than men for all 29 goals, suggesting that women perceive CMB participation as more important to student development than do men. Zacherman & Foubert (2014) indicated that women perform better academically than men, which means there might be differences in how men and women develop in college. Also, Foubert et al. (2005) assert

that women proceed through Chickering's vectors differently than men. Based on data from this previous research, I expected a difference between men and women. Subsequently, academic performance (Foubert et al., 2005) and student development are both higher for women than men.

Women's perceptions of CMB participation differed most from men's on the vectors of *Managing Emotions* and *Mature Relationships*. Foubert et al. (2005) reported that women showed higher levels of development in the vector *Mature Relationships*, indicating that we would see higher scores from women for this vector. Additionally, women differed most from men by rating the following development goals significantly higher than men: growth due to a disciplinary situation (*Establishing Identity*), accept others different from you (*Mature Relationships*), and comfort with self-identity (*Establishing Identity*). This suggests that women perceive CMB participation as more important to establishing identity than men. Women rated their perceptions of CMB participation's influence on development higher in every category than men, lending support to previous studies that indicated this outcome.

Class year of the participants also showed significant differences. Upperclassmen reported the highest scores while sophomore and first-year students reported the lowest scores across all vectors. Utilizing an ANOVA test, I deemed 13 goals statistically significant for showing that students of different class years rate them differently. These goals all represent different vectors so it is difficult to infer anything about specific vectors based on class year. Statistically significant goals with the highest mean scores were: creating a feeling of family, work successfully as a team, manage my time, and

effectively communicate with others. It seemed logical that older CMB students would rank all development goals higher than younger students because they have more experiences within the organization to use as a reference for rating their perceptions.

The size of band staff, as a demographic trait, was also of interest because some CMBs have a large instructional staff, while others may only have one director and are mostly led by student instruction. I assumed that students from bands with a larger staff would report lower scores, especially in the goals related to leadership, because they would not have the same amount of leadership opportunities as students from CMBs with a smaller staff. For the purpose of the survey, I asked students to identify as having 0–3, 4–6, or 7–20 instructional staff members, categorized as the low, mid, and high groups. The survey results showed that there was not much difference between the three assigned groups, but when CMB staffs were larger, students reported slightly higher on most goals. The goal with the largest disagreement among the staff size groups was "improvement in musical ability" which the "high" band staff group reported much higher than the "low" and "mid" group. This suggests that students perceived they make more musical improvement when more staff members were involved with instruction.

I also asked participants about the ratio of instruction that band staff versus students provide when rehearsing their CMB. Similar to size of staff, I assumed that leadership and development opportunities for students are limited in CMBs where the staff primarily handles the instruction. The highest reported scores were from the three middle groups, out of five, that utilize a combination of student and staff instruction. The three middle groups also contained the largest numbers of participants, with the 75%

Staff / 25% Students group (n = 367) containing almost half the number or total participants. This may have skewed the results in favor of the three middle groups. Also noteworthy is that students from CMBs with either 100% staff instruction or 100% student instruction reported lower scores in most categories, suggesting that some combination of student and staff instruction yields better student development results.

The final demographic category queried was the number of field shows each participant's CMB prepares each year. I utilized this question to discover how participants respond from CMBs that learn one or a few shows, in drum corps or high school competitive style, in contrast to those that learn several shows each year. The style of rehearsal instruction can be different for the two types of groups, so this question was about how participants respond based on band type. Participants from the CMBs that learn several shows a year reported slightly higher scores in 22 of the 29 developmental goals. The two groups' mean scores and standard deviation showed the most disagreement on the goal "understanding the politics of organization," with students from groups that do more shows rating this goal higher. I found similar disagreement with the goals "comfort with self-identity" and "ability to meet deadlines." Each of these goals associates with a distinctly different vector, so it is difficult to make any connections to perceptions based on vector. The goal "ability to meet deadlines" is possibly attributable to the notion that students in bands learning one or two shows a year may not feel the same pressure to meet a deadline as students in bands that learn a new show for each college football game. The other two mentioned goals likely function independently of the number of shows learned, so it seems this disagreement between the two groups on

those goals is likely an anomaly.

Implications

This study adds to college student development research by focusing on the college marching band (CMB) as a culture, community, and activity type that has previously received minimal attention. Although this type of study cannot make official determinations about the impact of CMBs on student development, it does provide descriptive insight about how participants perceive the college marching band's importance to college student development using Chickering's Seven Vectors as a formula for those goals.

The initial idea for this study arose from a desire to understand more about how college marching band participation affects student development. The next step was to define a scope of what is meant by the term student development. Chickering's Seven Vectors, although an older theoretical model, provided a lens to focus what college student development is meant to achieve. Use of the Seven Vectors helped provide a framework for the creation of goals that are specific to CMB participation. Subsequently, this research also adds to the breadth of studies that utilize and attempt to support Chickering's Seven Vectors model in assessing student development.

Most previous research on the college marching band focused on topics of music, marching, leadership, and teaching techniques, whose topics fall under the heading of music education. This study contributes to music education in a unique way that crosses over with psychology and identity development. Topics that crossover are becoming more prominent as shown in studies by Cumberledge (2015), Healy (2016), and Moder

(2013). The resulting crossover studies have provided a unique understanding of how college marching band participation, as an extracurricular activity, goes beyond its music performance role and affects student development.

New insights from this study add to the understanding of how students perceive CMB participation's importance to their student development, but often not always in the ways that music educators would assume. For example, some would assume that most students perceive CMB participation as important for developing autonomy and integrity, but participants rated those developmental vectors lower than the others. I also found that students perceived CMB participation to foster an increase in student social interaction and the creation of a feeling of family. Descriptive results like these can help the CMB music education community to understand what we can do to develop students in the areas that reported lower scores. Strengthening these weaker areas can help educators adapt our methods to more effectively develop students into mature and productive adults.

This study appears motivated by advocacy for CMB participation and its student development benefits. Trying to show the positive contribution of CMB participation to student development was a significant part of my initial motivation. However, as I progressed further into research on the topic, and surveyed previous student development research, I soon realized that this was not about advocacy, but rather about trying to understand how CMBs contribute and where they digress in their developmental role. I also discovered significant support for the notion that extracurricular activities serve students in ways that justify their importance. Determining how those experiences are

strong or weak can help us enhance our approach to developing and administrating those activities.

Limitations

As descriptive research, this study utilized a one-time survey as its primary investigative instrument. When using a survey administered to a random sample population, some limitations on reliability can arise. Researchers usually address reliability of the survey to determine that the same results are achieved when the survey is given repeatedly (Litwin, 1995; Phillips, 2008). Due to the nature of this study, it was impractical to administer the survey a second time. The reader should understand that these results are descriptive and should be used to enhance the understanding of the research problem. Survey research of this type does not supply enough information to conclude that CMB participation has a strong positive or negative impact on student development. However, it does provide us with a starting point to understand how students perceive the impact of CMB participation on student development.

An important limitation of this study is use of a large random sample population. The design of this survey sought to get a large and broad sample population from CMBs across the United States. A broad sample population seemed best to investigate the perceptions of CMB students from many different demographic backgrounds. This sample provided responses that represented a variety of experiences across the nation and not just from one or two bands. Several previous research studies on CMBs have utilized a small sample population, focusing on just one band or interviews with a few members of one band. Studies with small sample populations are often valuable for their ability to

provide a thorough understanding based on the responses of a few individuals. Given that there have been minimal amounts of research on student development in the college marching band, I engaged in a broad investigation to gain a wide understanding of how students perceive their development through participation.

With a large random population, the possibility of getting an atypical sample was a potential risk that posed a threat to the validity of the results. Too many participants from one area of the country or one band could have skewed the data. For example, there was some homogeny among the sample population with their location by state, with 194 of 768 participants being from Pennsylvania. However, the remaining 574 participants were from 18 different states, hopefully providing some assurance that the chances of an atypical sample are low.

A method for assessing reliability is to administer the survey to the participants more than once to compare results. However, administering the survey more than once to the same participants was not practical in this situation. With any survey research it is difficult to receive a high response rate. Asking participants to take the test twice could have lowered response rate. I preferred a higher response rate over insuring reliability.

Surveying the first set of participants a second time also could have compromised the results by changing their perception of answering anonymously. In order to contact the participants and distribute the survey a second time, I would have needed to ask for identifying information. If participants did not feel a sense of anonymity, it could have changed how they responded to the questions. While using a one-time survey did cause an inability to demonstrate validity, the ability to guarantee anonymity and have a large

participant pool seemed to outweigh the costs.

Both the survey and the reporting of information concerning gender did not completely comply with the most recent publication of the American Psychological Association's seventh edition style guide. This project was created and investigated several years prior to current guidelines on gender and current designations. At the time, I focused more on the difference between only men and women because women's causes were receiving a good deal of attention in popular culture. However, if I were to redo the study today, I would provide additional survey options for gender identity that conform to the latest style guide and social climate regarding gender identity.

Another limitation was the inability to reach or account for CMBs from historically black colleges and universities. I distributed the survey through the College Band Directors National Association email list and asked band directors to voluntarily distribute the survey to their students. Based on my personal perception of who attends the CBDNA Athletic Band Symposium, it seems that very few band directors from HBCUs participate or are members. Unfortunately, I did not initially realize the importance of verifying the inclusion of HBCU marching bands when creating this survey. In retrospect, the survey could have asked if a participant was from an HBCU band. In retrospect, I should have personally emailed directors from HBCUs and asked them to share the survey with their students. A possible future area of study is to investigate how the perceptions of band members at HBCUs differ from those of non-HBCU band members.

There was also an inability to directly explain to the participants what was meant

by each question. Survey questions should be written in a manner that is very clear, leaving little ambiguity for how the participant understands the question. I did have the 29 goals reviewed by several people to search for ambiguity. However, I did not provide participants with the context of the goals' relationship to Chickering's Seven Vectors. The goals were simple and straightforward, but the possibility for misunderstanding did exist.

Suggestions for Further Research

Several possibilities for future research have arisen based on the information brought forth by this study. Exploring student perceptions with a more focused sample population is one possibility, perhaps utilizing only one college marching band or a small group from within one band. Utilizing interviews would provide a greater depth of understanding that we would expect from a qualitative study, going beyond the surface responses of survey research.

Exploring the same topic with a longitudinal study could also be an area of future study, allowing for the study of how students change their perceptions over time. However, this would almost certainly require limiting the sample population in order to maintain that the same students can be reassessed over time. Longitudinal studies have been popular in research that utilizes Chickering's Seven Vectors as a framework because most researchers were trying to determine how students change in relation to the vectors. This would be an incredible undertaking, requiring several years of evaluation, but the results could provide information about how student views change from the beginning to the end of their college career.

Other researchers criticized Chickering for applying his framework to small sample populations that featured limited racial diversity. One limitation of this study was the inability to determine if band students from HBCUs were represented. A possible future research topic is to explore how HBCU band students differ from non-HBCU band students in their perceptions of the college marching band's importance to student development. It is undeniable that there are musical and stylistic differences between the two types of college marching bands. Investigating those differences, and possible cultural differences, would prove interesting if we could identify areas in which marching bands at HBCUs are strong at fostering student development.

If we look at the development goals and vectors that participants reported lower than expected, there are several topics that could be specifically explored to provide insight and verification of this study. From the perspective of the Seven Vectors, one could more deeply explore *Autonomy* and how developing it is affected by CMB participation. Similar focus could be placed on the vectors of *Developing Integrity* and *Establishing Identity*. One could even narrow their focus down to one component of developing integrity by focusing on service. A study of how CMB Greek organizations affect a student's commitment to service could help to explain why this was not a highly rated goal in this study. It can also help to provide insight for new approaches to how those organizations function. Similarly, one could narrow the focus of establishing identity by looking at how CMB participation affects students' acknowledgement of their sexual orientation. These topics might seem unrelated to the purpose of CMBs, but the social interaction and environment of college marching bands likely have an impact on

identity development, and sexual orientation is an important part of that vector.

And finally, exploring the way rehearsal style impacts CMB student development could be insightful. There has been research on student leadership in the CMB, but not as much on how the rehearsal structure changes the experiences that students receive. In this study, I surveyed the size of staff, ratio of student versus staff instruction, and type number of shows to gain a picture of the type of instruction a student was receiving. It is often a combination of these factors that make up the rehearsal structure of a band and their performance goals. Further study on how these factors affect student development could help CMB directors to incorporate those best practices.

Conclusion

The college marching band is more than just an extracurricular activity. It is a community with a culture that fosters college student development as defined by student development researchers. CMB participation requires a high level of involvement from its members, which in turn provides rewards beyond attending a football game or making music. The proof is that many students across the United States, year after year, voluntarily participate in college marching bands, even with little to no monetary or academic reward. This involvement is most likely the due to receiving gratifying personal experiences, leadership opportunities, and a sense of community formed through CMB participation.

This study revealed that students perceive CMB participation as an important catalyst to their development, but not always in the ways one might assume. Previous research indicated that factors such as gender, leadership, and extracurricular

involvement would display differences in student perceptions. Those differences were visible in this study; women, leaders, and involved students reported higher scores for CMB influence on development. However, some unexpected results also appeared in this study. I was surprised that development vectors *Autonomy*, *Establishing Identity*, and *Developing Integrity* received low scores, as did several goals under these vectors. Also unexpected, students from CMBs with larger numbers of instructional staff reported higher scores than those with lower numbers of staff, indicating that more staff does not necessarily limit a student's access to development opportunities.

Independent of CMB participation, I did expect responses to differ by demographic background of participants based on the results of extant research. In this study, women reported higher scores than men, older students reported higher scores than younger, and more involved students reported higher scores than less involved students. Because these groups provided ratings that are mostly in agreement with previous research, it appears that there is little difference between CMB and non-CMB students. However, CMB students did rate 11 of 29 goals above 3.0 on a 4.0-point scale, and those goals represented 6 of 7 Chickering vectors. It was favorable to see that several development vectors and goals received high ratings when viewed through CMB participation.

This study was a descriptive analysis of student perceptions that provided insight on how CMB staffs can enhance or modify band experiences to foster higher levels of student development. Of course, why would band directors want to do this when their main goal is to perform music and field shows? The reason is because most band

directors and music administrators have chosen this occupation because of their dedication to the education and development of students. They all want to impress on students a way of thinking, acting, or being that they believe makes them better people. So, it is obvious that college marching band directors can, and already do, promote both musical performances and student development at the same time.

APPENDIX A

SURVEY QUESTIONS

Section 1: Demographic Information

What is your primary marching band instrument (section)?
Piccolo/Flute, Clarinet, Saxophone, Trumpet, Horn/Mellophone, Trombone, Baritone/Euphonium, Tuba, Drumline/Front Ensemble, Colorguard, Twirler, Dance Team, Manager/Student Staff, other.

In what state is your college/university located?

What is your current level in college?
First Year, Sophomore, Junior, Senior, Beyond Senior, Prefer not to answer

What is your primary major?

How would you classify your gender?
Female, Male, prefer not to answer

What leadership/administrative roles have you held in your college marching band?
Drum Major, Band Officer, Section Leader, Sub Section Leader, Student Worker, Rank/Squad Leader, other, none, prefer not to answer

How many extracurricular activities do you participate in outside of marching band?

How many directors, graduate assistants, and/or instructors work with your marching band (Please limit responses to those in a teaching role)?

What combination of staff and students best describes who rehearses your marching band?
100% Staff; 75% Staff / 25% Students; 50% Staff/50% Students; 25% Staff / 75% Students; 100% Students

How many shows does your college band perform in one season?

Section 2: Please rate the influence that college marching band participation has had on the following statements – Please rate 1 to 4 (4 = strongest influence)
0-Not Applicable, 1-No Influence, 2-Some Influence, 3-Moderate Influence, 4-Strong Influence

1. Your ability to make decisions independent of peer opinions
2. Your reduced need for continual reassurance
3. Ability to think for myself
4. Ability to meet deadlines, fill out forms, and respond to organizational requests
5. Reduction of parental involvement in my life
6. Showing up on time
7. Ability to organize a meeting or event
8. Your ability to solve problems
9. An increase in social interaction with your peers
10. Ability to effectively communicate with others
11. Improvement in musical ability
12. Ability to work successfully as a team
13. Ability to effectively manage my time (between course work, extracurricular, and social life)
14. Ability to humanize values and empathize with others
15. Desire to engage in community service
16. Desire to help others in need (tutoring, crisis management, mentoring)
17. Ability to commit to seeing a project through to the end
18. Defining your personal leadership style
19. Creating a feeling of family or belonging
20. Ability to understand the need for compliance with rules
21. Feeling comfortable with experimentation (trying new things)
22. Ability to understand my role in an organization (follower or leader)
23. Your personal growth due to a disciplinary situation with marching band
24. Ability to feel comfortable with self-identity
25. Accepting and acknowledging your sexual orientation
26. Ability to handle frustrating situations
27. Ability to take criticism
28. Ability to work with and accept others who are different from you (Race, Religion, Gender, etc.)
29. Ability to understand and work within the politics of an organization

APPENDIX B

LIKERT-TYPE QUESTIONS BY SEVEN VECTORS CATEGORY

Autonomy	Your ability to make decisions independent of peer opinions
Autonomy	Your reduced need for continual reassurance
Autonomy	Ability to think for myself
Autonomy	Ability to meet deadlines, fill out forms, and respond to organizational requests
Autonomy	Reduction of parental involvement in my life
Autonomy	Showing up on time
Autonomy	Ability to organize a meeting or event
Developing Competence	Your ability to solve problems
Developing Competence	An increase in social interaction with your peers
Developing Competence	Ability to effectively communicate with others
Developing Competence	Improvement in musical ability
Developing Competence	Ability to work successfully as a team
Developing Competence	Ability to effectively manage my time (between course work, extracurricular, and social life)
Developing Integrity	Ability to humanize values and empathize with others
Developing Integrity	Desire to engage in community service
Developing Integrity	Desire to help others in need (tutoring, crisis management, mentoring)
Developing Purpose	Ability to commit to seeing a project through to the end

Developing Purpose	Defining your personal leadership style
Developing Purpose	Creating a feeling of family or belonging
Developing Purpose	Ability to understand the need for compliance with rules
Establishing Identity	Feeling comfortable with experimentation (trying new things)
Establishing Identity	Ability to understand my role in an organization (follower or leader)
Establishing Identity	Your personal growth due to a disciplinary situation with marching band
Establishing Identity	Ability to feel comfortable with self-identity
Establishing Identity	Accepting and acknowledging your sexual orientation
Managing Emotions	Ability to handle frustrating situations
Managing Emotions	Ability to take criticism
Mature Relationships	Ability to work with and accept others who are different from you (Race, Religion, Gender, etc.)
Mature Relationships	Ability to understand and work within the politics of an organization

BIBLIOGRAPHY

Abbott, S. (Ed.). (2014). The Glossary of Education Reform. Retrieved from http://edglossary.org/co-curricular/

Abeles, H. (2009). Are musical instrument gender associations changing? *Journal of Research in Music Education*, *57*(2), 127–139. https://doi.org/10.1177/0022429409335878

Abrahamowicz, D. (1985). *Student activities participation and its relationship to student perceptions of college experiences and student satisfaction with college* (Doctoral dissertation – University of Toledo). ProQuest Dissertations Publishing (Publication No. 8607487).

Abrahamowicz, D. (1988). College Involvement, Perceptions, and Satisfaction: A Study of Membership in Student Organizations. *Journal of College Student Development, 29*(3), 233–238.

Adelson, J. L., & McCoach, D. B. (2010). Measuring the mathematical attitudes of elementary students: The effects of a 4-point or 5-point Likert-type scale. *Educational and Psychological Measurement*, *70*(5), 796–807. DOI: 10.1177/0013164410366694

Aho, E. W. (2005). *A descriptive analysis of the fourteen mid-American conference athletic band programs* (Doctoral dissertation – The Ohio State University). ProQuest Dissertations Publishing (Publication No. 3180882).

Ammann, B. T. (1989). *An undergraduate marching band techniques curriculum guide developed from the opinions of recent college graduates* (Doctoral Dissertation – Arizona State University). ProQuest Dissertations Publishing (Publication No. 8919586).

Amundson, B. M., & Wyers, G. (2012). *Factors related to continued choral participation: A comparative study of participants and non-participants in college choir* (Doctoral Dissertation – University of Washington). ProQuest Dissertations Publishing (Publication No. 3505015).

Anaya, G. (1989). Student's perceived cognitive change. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Anaya, G. (1997). College experiences and student learning: The influence of active learning, college environments and cocurricular activities. *Journal of College Student Development, 37*(6), 611–622.

Arnwine, J.A. (1996). The relationship of high school music instruction in band classes with continuing interests in music. (Unpublished doctoral dissertation). University of Southern California, Los Angeles.

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25*(4), 297–308.

Astin, A. W. (1985). *Achieving educational excellence*. San Francisco, CA: Jossey-Bass.

Astin, A. W. (1993). *Higher education and the concept of community*. Urbana-Champaign: University of Illinois at Urbana-Champaign.

Astin, A. W. (1997). *What matters in college? Four critical years revisited* (1st ed.). San Francisco: Jossey-Bass.

Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development, 40*(5), 518–29.

Astin, A. W. (2012). *Assessment for excellence the philosophy and practice of assessment and evaluation in higher education* (2nd ed.). Lanham, MD: Rowman & Littlefield Publishers.

Astin, A. W., Astin, H. S., & Lindholm, J. A. (2011). Assessing Students' Spiritual and Religious Qualities. *Journal of College Student Development, 52*(1), 39–61.

Bean, J. P., & Kuh, G. D. (1984). The reciprocity between student-faculty informal contact and academic performance of university undergraduate students. *Research in Higher Education, 21,* 461–477.

Broh, B. A. (2002). Linking extracurricular programming to academic achievement: Who benefits and why? *Sociology of Education, 75,* 69–91. https://doi.org/10.2307/3090254

Brown, J. D. (2000). What issues affect Likert-scale questionnaire formats. *Shiken: JALT Testing & Evaluation SIG Newsletter*, *4*(1). https://hosted.jalt.org/test/bro_7.htm

Campbell, C. M., Smith, M., Dugan, J. P., & Komives, S. R. (2012). Mentors and college student leadership outcomes: The importance of position and process. *Review of Higher Education, 35*(4), 595–625.

Campbell, D. T. & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Boston: Houghton Mifflin Co.

Chickering, A. W., & Reiser, L. (1993). *Education and identity* (2nd ed.). San Francisco: Jossey-Bass Publishers.

Clothier, R. I. (1967). *Factors influencing freshmen with high school band experience to elect or not to elect band membership at five liberal arts colleges in Iowa* (Doctoral Dissertation – University of Northern Colorado). ProQuest Dissertations Publishing (Publication No. 6713671).

Constantine, M. E. C. (2011). *The High School Musical Experiences of College Students* (Doctoral Dissertation – Case Western Reserve University). ProQuest Dissertations Publishing (Publication No. 3497590).

Cooper, D. L., Healy, M. A., & Simpson, J. (1994). Student development through involvement: Specific changes over time. *Journal of College Student Development, 35*(2), 98–102.

Cowen, V. (2006). The contribution of marching band participation to overall physical activity for a sample of university students. *Perceptual and Motor Skills, 103*(2), 457–460.

Craig, D. H., & Warner, T. R. (1991). Working together: The "forgotten majority" of student organizations and campus activities. *Campus Activities Programming, 23*(9), 42–46.

Cress, C. M., Astin, H. S., Zimmerman-Oster, K., & Burkhardt, J. C. (2001). Developmental outcomes of college students' involvement in leadership activities. *Journal of College Student Development, 42*(1), 15.

Cruce, T. M., Wolniak, G. C., Seifert, T. A., & Pascarella, E. T. (2006). Impacts of Good Practices on Cognitive Development, Learning Orientations, and Graduate Degree Plans During the First Year of College. *Journal of College Student Development, 47*(4), 365–383.

Cumberledge, J. (2015). *The use of one week's time among specific groups of college students: Music majors, non- music majors, and marching band participants* (Doctoral Dissertation – The Florida State University). ProQuest Dissertations Publishing (Publication No. 3724220).

Cumberledge, J. (2017). The Time Usage of College Music Majors, Non-Music Majors, and Marching Band Participants. *SAGE Open, 7*(2). https://doi.org/10.1177/2158244017705246

Cumberledge, J. (2018). Instrument and Gender as Factors in the Perceptions of Musicians and Musical Performance. *Contributions to Music Education*, *43*, 159–

173. Retrieved from http://search.proquest.com/docview/2072149363/

Davey, C. M. (2010). *Predicting College Student Success: A Historical and Predictive Examination of High School Activities and Accomplishments* (Doctoral Dissertation – The University of Utah). ProQuest Dissertations Publishing (Publication No. 3409995).

Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of qualitative research*. Thousand Oaks: Sage Publications.

Dunnigan, P. (2007). *Marching band techniques*. Northfield, IL: The Instrumentalist Publishing Company.

Eccles, J. S., & Barber, B. L. (1999). Student Council, Volunteering, Basketball, or Marching Band: What Kind of Extracurricular Involvement Matters? *Journal of Adolescent Research, 14*(1), 10–43.

Eccles, J. S., Barber, B. L., Stone, M. R., & Hunt, J. (2003). Extracurricular activities and adolescent development. *Journal of Social Issues, 59,* 865–889.

Elkins, D. J., Forrester, S. A., & Noel-Elkins, A. V. (2011). Students' Perceived Sense of Campus Community: The Influence of Out-of-Class Experience. *College Student Journal, 45*(1), 105–121.

Elkins, D. J., Forrester, S. A., & Noel-Elkins, A. V. (2011). Students' Perceived Sense of Campus Community: The influence of out-of-class experiences. *College Student Journal*, *45*(1).

Elliott, J. R. (2009). *The relationship of involvement in co-curricular programs on community college student success and development* (Doctoral Dissertation – The University of Nebraska – Lincoln). ProQuest Dissertations Publishing (Publication No. 3369325).

Erikson, E. H. (1958). *Young man Luther; a study in psychoanalysis and history*. ([1st ed.].). Norton.

Erikson, E. H. (1968). *Identity, youth, and crisis* ([1st ed.].). W. W. Norton.

Erikson, E. H. (1998). *The life cycle completed* (Extended version / with new chapters on the ninth stage of development by Joan M. Erikson). W.W. Norton.

Evans, N. J., Forney, D. S., Guido, F. M., Patton, L. D., & Renn, K. A. (2010). *Student development in college : Theory, research, and practice* (2nd ed.). San Francisco: Jossey-Bass.

Ewert, S. (2012). Fewer diplomas for men: The influence of college experiences on the gender gap in college graduation. *The Journal of Higher Education*, *83*(6), 824–850. https://doi.org/10.1080/00221546.2012.11777271

Faber, A. R. (2010). *A study of factors that influence first-year nonmusic majors' decisions to participate in music ensembles at small liberal arts colleges in Indiana* (Doctoral Dissertation – Ball State University). ProQuest Dissertations Publishing (Publication No. 3426246).

Farley C., & Walker, M. (2015). Student Development Theory [PowerPoint Slides]. University of North Carolina Wilmington Division of Student Affairs. https://uncw.edu/studentaffairs/committees/pdc/documents/studentdevelopmenttheory101.pdf

Fife, J. (1988). Foreword. In Kuh, G. D., & E. J. Whitt, *The Invisible Tapestry: Culture in American Colleges and Universities* (pp. xvii–xviii). College Station, TX: Association for the Study of Higher Education.

Fink, A. (2003). How to sample in surveys. *The Survey Kit, 7.* Thousand Oaks: SAGE Publications, Incorporated.

Foubert, J. D., & Grainger, L. A. (2006). Effects of Involvement in Clubs and Organizations on the Psychosocial Development of First-Year and Senior College Students. *Journal of Student Affairs Research and Practice, 43*(1), 166–182.

Foubert, J. D., Nixon, M. L., Sisson, V. S., & Barnes, A. C. (2005). A longitudinal study of Chickering and Reisser's vectors: Exploring gender differences and implications for refining the theory. *Journal of College Student Development, 46*(5), 461–471.

Freud, S. (1921). *A general introduction to psychoanalysis* (9th ed..). Boni and Liveright.

Frey, R., & Phillips, R. (2015, May 27–30). *Event Schedule*. CBDNA Athletic Band Symposium, Colorado State University, Ft. Collins, CO. https://bit.ly/2ZEHlm8

Fuller, J. A. (1995*). A descriptive analysis of the eleven big ten conference marching band programs* (Doctoral Dissertation – The Ohio State University). ProQuest Dissertations Publishing (Publication No. 9533973).

Garrison, P. K. (1986). The value of marching band. *Music Educators Journal, 72*(5), 48–52. doi: 10.2307/3396614

Gellin, A. (2003). The effect of undergraduate student involvement on critical thinking: A meta-analysis of the literature 1991–2000. *Journal of College Student Development, 44*(6), 746–762.

Gibbs, B. (2015, May 27–30). *Ethical Behavior, Discipline Management and Effective Leadership within Organizations: Learning to Model Ethical Behaviors and Manage Discipline among Peers* [Poster Presentation]. CBDNA Athletic Band Symposium, Colorado State University, Ft. Collins, CO.

Goldberg, D. B. (2016). Impact of Childhood Sexual Abuse on College Student Development: A Seven-Vectors Perspective. *Journal of College Counseling 19*, 168–179.

Goldman, Z., & Goodboy, A. (2017). Explaining doctoral students' relational maintenance with their advisor: a psychosocial development perspective. *Communication Education*, *66*, 70–89.

Goodrich, A. (2021). Peer mentoring in an extracurricular music class. *International Journal of Music Education, 39*(4), 410–423. https://doi.org/10.1177/0255761420988922

Gould, E. S. (2003). Cultural Contexts of Exclusion: Women College Band Directors. *Research and Issues in Music Education*, *1*(1), n1.

Grant, D. E. (2000). *The impact of mentoring and gender-specific role models on women college band directors at four different career stages* (unpublished doctoral dissertation). University of Minnesota.

Gray, M. J. (1987). *College student outcomes assessment: A talent development perspective*. College Station, Tex.: Association for the Study of Higher Education.

Harper, S. R., & Quaye, S. J. (2009). *Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations* New York: Routledge.

Harris, F. & Lester, J. (2009). Gender-Specific Approaches to Enhancing Identity Development among Undergraduate Women and Men. In S. Harper & S. Quaye (Eds.), *Student Engagement in Higher Education* (pp. 99–115). New York, NY: Routledge.

Haynie, J. T. (1971). *The changing role of the band in American colleges and universities, 1900 to 1968* (Doctoral Dissertation – Vanderbilt University). ProQuest Dissertations Publishing (Publication No. 7126211).

Healey, D. (2016). *E Pluribus Unum: An Evaluation of Student Engagement and Learning in the College Marching Band* (Doctoral Dissertation – Boston College). ProQuest Dissertations Publishing (Publication No. 10076306).

Hernandez, K., Hogan, S., Hathaway, C., & Lovell, C. D. (1999). Analysis of the literature on the impact of student involvement on student development and learning: More questions than answers? *NASPA Journal, 36*(3), 184.

Hill, T. E. (2012). *Measuring factors that contribute to persistence in college and university marching bands* (Doctoral Dissertation). Boise State University, Boise. https://scholarworks.boisestate.edu/td/967/

Holzweiss, P., Rahn, R., & Wickline, J. (2007). Are All Student Organizations Created Equal? The Differences and Implications of Student Participation in Academic versus Non-Academic Organizations. *College Student Affairs Journal, 27*(1), 136–150.

Hood, A. B. (1984). Student development: Does participation affect growth? *The Bulletin of the Association of College Unions-International, 52*(6), 16–19.

Hood, A. B., & Jackson, L. M. (1986). Iowa student development instrument. Retrieved April, 25, 2002.

Hood, A. B., & Mines, R. A. (1986). Freeing interpersonal relationships. *The Iowa Student Developmental Inventories*, 5-1.

Inman, P. S. (1997). *The impact of college residence on the development of critical thinking skills in college freshmen* (Doctoral Dissertation – University of Illinois at Chicago). ProQuest Dissertations Publishing (Publication No. 9728525).

Jones, S. (2014). *An exploration of band students' experiences with informal learning* (Doctoral Dissertation – Northwestern University). ProQuest Dissertations Publishing (Publication No. 3638204).

Josselson, R. (1987). *Finding herself: pathways to identity development in women* (1st ed..). Jossey-Bass.

Keen, C. (2001). A Study of Changes in Intellectual Development from Freshman to Senior Year at a Cooperative Education College. *Journal of Cooperative Education, 36*(3), 37–45.

Kenny, A. (2014). Practice through partnership: Examining the theoretical framework and development of a "community of musical practice". *International Journal of Music Education, 32*(4), 396–408.

Kerstetter, K. M. (2011). Investigating high school band recruitment procedures using educational marketing principles. *Journal of Band Research, 46*(2), 1–17.

King, P. M., & Howard-Hamilton, M. F. (2000). Using student development theory to inform institutional research. *New Directions for Institutional Research*, *2000*(108), 19–36.

Kingkade, T. (2014, August 05). Here Are The Dirty, Sexual Things Ohio State's Band Did That Got The Director Fired. *Huffington Post.* https://www.huffpost.com/entry/ohio-state-sexual-director-fired_n_5649531

Koch, G. F. (2008). *Academic and nonacademic experiences that affect first-generation college student attrition* (Doctoral Dissertation – Florida International University). ProQuest Dissertations Publishing (Publication No. 3319006).

Koppelman, K. (2011). *The Great Diversity Debate: Embracing Pluralism in School and Society*. United States: Teachers College Press.

Kuh, G. D. (1993). In Their Own Words: What Students Learn outside the Classroom. *American Educational Research Journal, 30*(2), 277–304.

Kuh, G. D. (1994). *Student learning outside the classroom: Transcending artificial boundaries*. Washington, D.C.: Graduate School of Education and Human Development, The George Washington University.

Kuh, G. D. (1995). The Other Curriculum: Out-of-Class Experiences Associated with Student Learning and Personal Development. *Journal of Higher Education, 66*(2), 123–155.

Kuh, G. D. (2005). *Assessing conditions to enhance educational effectiveness: The inventory for student engagement and success* (1st ed.). San Francisco: Jossey-Bass.

Kuh, G. D. (2010). What student affairs professionals need to know about student engagement. *Journal of College Student Development, 50*(6), 683–706.

Kuh, G. D. (2015). *Using evidence of student learning to improve higher education*. San Francisco, California: National Institute for Learning Outcomes Assessment.

Kuh, G. D., & Whitt, E. J. (1988). *The invisible tapestry: Culture in American colleges and universities.* College Station, TX: Association for the Study of Higher Education.

Kuh, G. D., Schuh, J. H., Whitt, E. J., Andreas, R. E., Lyons, J. W., Strange, C. C., Krehbiel, L. E., & K. A. MacKay (1991). *Involving Colleges: Successful Approaches to Fostering Student Learning and Development Outside the Classroom.* San Francisco: Jossey-Bass Publishers.

Lam, T., & Green, K. E. (2019). Likert scale: Misuse Of mid-point anchor. *International Journal of Exercise Science*. http://pstorage-advance-4589058904380.s3.amazonaws.com/14491286/MidpointAnchorinLikertScale2.docx.

Lavrakas, P. J. (ed.) (2008). *Encyclopedia of survey research methods*. Thousand Oaks, CA: Sage Publications, Inc. doi: 10.4135/9781412963947

Levine, J. M., & Moreland, R. L. (1994). Group Socialization: Theory and Research. *European Review of Social Psychology, 5*(1), 305–336.

Light, K. M. (2006). *Continuing in band: Marketing to incoming high school students* (Doctoral Dissertation – University of Miami). ProQuest Dissertations Publishing (Publication No. 3215270).

Litwin, M. S. (1995). *How to Measure Survey Reliability and Validity: Vol. 7*. Thousand Oaks: SAGE Publications, Incorporated.

Long, D. (2012). Theories and models of student development. In L. J. Hinchliffe & M. A. Wong (Eds.), *Environments for student growth and development: Librarians and student affairs in collaboration* (pp. 41–55). Chicago: Association of College & Research Libraries.

Ludwig, N. M. (2011). *First-Generation College Students and the Four-Year College Environment: An Exploration of Supplementary and Complementary Fit* (Doctoral Dissertation – University of Massachusetts, Boston). ProQuest Dissertations Publishing (Publication No. 3490001).

Madsen, C. K., Plack, D., & Dunnigan, P. (2007). The marching band as a recruiter for the university. *Journal of Band Research, 43(1), 54–62.*

Magolda, M. B. B. (1992). Cocurricular Influences on College Students' Intellectual Development. *Journal of College Student Development, 33*(3), 203–213.

Mantie, R., & Dorfman, J. (2014). Music Participation and Nonparticipation of Nonmajors on College Campuses. *Bulletin of the Council for Research in Music Education, 200*, 41–62.

Marshall, K. (2009). Brass chicks and drummer girls: Performing gender within the university marching band. *Intersections: Women's and Gender Studies in Review Across Disciplines, 7*(1)*,* 26–39.

Martin, L. M. (2000). The relationship of college experiences to psychosocial outcomes in students. *Journal of College Student Development, 41*(3), 292.

McCarthy, M., & Kuh, G. D. (2006). Are Students Ready for College? What Student Engagement Data Say. *Phi Delta Kappan, 87*(9), 664–669.

McClarty, J. L. (1968). *An investigation to determine the reasons former high school band members elect to participate or not to participate in band upon entering the University of Montana* (Doctoral Dissertation – University of Montana). ProQuest Dissertations Publishing (Publication No. 6814524).

McDavid, J. B. (1999). *A study of factors influencing nonparticipation in collegiate band programs among first-year students in the Pacific-10 Athletic Conference* (Doctoral Dissertation – The Ohio State University). ProQuest Dissertations Publishing (Publication No. 9931644).

McKeage, K. M. (2005). Gender and Participation in High School and College Instrumental Jazz Ensembles. *Journal of Research in Music Education, 52*(4), 343.

Milem, J. F., & Berger, J. B. (1997). A Modified Model of College Student Persistence: Exploring the Relationship between Astin's Theory of Involvement and Tinto's Theory of Student Departure. *Journal of College Student Development, 38*(4), 387–400.

Moder, J. A. (2013). *Factors influencing non-music majors' decisions to participate in collegiate bands* (Doctoral Dissertation). Kansas City, Missouri: University of Missouri-Kansas City.

Mountford, R. D. (1977). *Significant predictors of college band participation by college freshmen with high school band experience* (Doctoral Dissertation – The Ohio State University). ProQuest Dissertations Publishing (Publication No. 7724674).

Mural, Z. (2011). *On Purpose: The Relationship Between Purpose and Extracurricular Activity Participation for First Year College Students* (Doctoral Dissertation – Michigan State University). ProQuest Dissertations Publishing (Publication No. 3469047).

National Survey of Student Engagement. (2001). *The College Student Report*. Bloomington, IN: Indiana University Center for Postsecondary Research.

Pace, C. R. (1979). *Measuring outcomes of college: Fifty years of findings and recommendations for the future* (1st ed.). San Francisco: Jossey-Bass.

Pace, C. R. (1984). *Measuring the Quality of College Student Experiences.* Los Angeles: UCLA.

Pace, C. R. (1990). *The undergraduates: A report of their activities and progress in college in the 1980's.* Los Angeles: Center for the Study of Evaluation University of California, Los Angeles.

Pace, C. R., & Kuh, G. D. (1998). *College student experiences questionnaire.* Center for Postsecondary Research and Planning, Indiana University, Bloomington.

Pace, C. R., & McFee, A. (1960). The college environment. *Review of Educational Research, 30*(4), 311–320.

Pace, C. R., & United States. (1982). *Achievement and the quality of student effort*. Washington, D.C.: National Commission on Excellence in Education.

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings and insights from twenty years of research* (1st ed.) San Francisco : Jossey-Bass Publishers.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students : A third decade of research* (1st ed.) San Francisco : Jossey-Bass.

Pascarella, E. T., Pierson, C. T., Wolniak, G. C., & Terenzini, P. T. (2004). First-Generation College Students: Additional Evidence on College Experiences and Outcomes. *Journal of Higher Education, 75*(3), 249.

Perez, E. (2008, November 24). UW band parents' letters say hazing violated their sons' morals. *Milwaukee Journal Sentinel* https://archive.jsonline.com/news/education/35028764.html/

Phelps, R. P., Sadoff, R. H., Warburton, E. C., & Ferrara, L. (2005). *A Guide to Research in Music Education* (5th ed.). Lanham, MD: The Scarecrow Press, Inc.

Pike, G. R., Kuh, G. D., & McCormick, A. C. (2011). An Investigation of the Contingent Relationships Between Learning Community Participation and Student Engagement. *Research in Higher Education, 52*(3), 300–322.

Pike, G., & Kuh, G. (2005). A Typology of Student Engagement for American Colleges and Universities. *Research in Higher Education, 46*(2), 185–209.

Pope, R. L. (1998). The relationship between psychosocial development and racial identity of black college students. *Journal of College Student Development, 39*, 273–282.

Pope, R. L. (2000). The relationship between psychosocial development and racial identity of college students of color. *Journal of College Student Development, 41*,

302–312.

Reisser, L. (1995). Revisiting the seven vectors. *Journal of College Student Development, 36*, 505–511.

Richards, E. W. (2012). *The Influence of Marching Band Participation on the Development of Effective Music Teaching Skills* (Doctoral Dissertation – The Florida State University). ProQuest Dissertations Publishing (Publication No. 3539609).

Ricketts, K. G., Bruce, J. A., & Ewing, J. C. (2008). How today's undergraduate students see themselves as tomorrow's socially responsible leaders. *Journal of Leadership Education*, *7*(1), 24–42.

Rodgers, R.F. (1990). Recent theories and research underlying student development. In D.G. Creamer (Ed.), *College student development: Theory and practice for the 1990's* (pp. 27–79). Alexandria, VA: American College Personnel Association.

Rosbrook, E. (2019). *The Use of Student Development Theories in Student Conduct Practices.* LinkedIn. https://www.linkedin.com/pulse/use-student-development-theories-conduct-practices-esther-rosbrook

Satterwhite, H. D. (1987). *The Influence of College Marching Band Participation on Cognizable Aspects of Marching Band Director Expectations (Alabama, Georgia, South Carolina)* (Doctoral Dissertation – The University of Alabama). ProQuest Dissertations Publishing (Publication No. 8720707).

Scheivert, J. E. (2018). *Big life. Big stage. Big Ten. An examination of Big Ten Conference marching band policies and procedures concerning social media, copyright, relationships with athletic departments, and behavioral expectations* (Doctoral Dissertation). University of Iowa. https://doi.org/10.17077/etd.hc5dw9fy

Schroeder, C. C. (1996). Designing learning environments that integrate curricular and cocurricular experiences. *Journal of College Student Development, 37*(2), 174–181.

Schuh, J. (1994). Education and Identity (Book Review). *Journal of College Student Development*. Alexandria, Va.: American College Personnel Association.

Schuh, J. H., & Laverty, M. (1983). The perceived long-term influence of holding a significant student leadership position. *Journal of College Student Personnel, 24*(1), 28–32.

Silveira, J. M., & Hudson, M. W. (2015). Hazing in the college marching band. *Journal of Research in Music Education, 63*(1), 5–27.

Silveira, J. M., & Hudson, M. W. (2015). Hazing in the College Marching Band. *Journal of Research in Music Education*, *63*(1), 5–27. https://doi.org/10.1177/0022429415569064

Stanford, S. W. (1990). *The influence of extracurricular involvement on student development among campus leaders at two large southeastern universities* (Doctoral Dissertation – The Florida State University). ProQuest Dissertations Publishing (Publication No. 9112117).

Stanford, S. W. (1992). Extracurricular Involvement and Development Among Undergraduate Student Leaders. *College Student Affairs Journal, 12*(1), 17–24.

Strayhorn, T. L. (2005). *More than money matters: An integrated model of graduate student persistence*. Blacksburg, Va.: University Libraries, Virginia Polytechnic Institute and State University.

Strayhorn, T. L. (2012). *College students' sense of belonging a key to educational success for all students* London; New York: Routledge.

Strayhorn, T. L. (2013). *Theoretical frameworks in college student research*. Lanham, Maryland: University Press of America.

Tedford, J., Zerull, D., Marlatt, J., & Rechel, L. (2014). *College instrumental ensemble participation rates: A study of participants and non-participants at a liberal arts college* (Doctoral Dissertation – Shenandoah University). ProQuest Dissertations Publishing (Publication No. 3680896).

Terenzini, P. T. (1995). Academic and Out-of-Class Influences on Students' Intellectual Orientations. *Review of Higher Education, 19*(1), 23–44.

Terenzini, P. T., & National Center on Postsecondary Teaching, Learning, and Assessment, University Park, PA. (1993). *In- and Out-of-Class Influences Affecting the Development of Students' Intellectual Orientations. ASHE Annual Meeting Paper*. Washington, D.C.: Distributed by ERIC Clearinghouse.

Terenzini, P. T., Springer, L., Yaeger, P. M., Pascarella, E. T., & Nora, A. (1996). First-generation college students: Characteristics, experiences, and cognitive development. *Research in Higher Education, 37*(1), 1–22.

Thompson, J. (2016, January 07). Sex, Scandal and the Marching Band: Inside the New Rules at Ohio State. *Rolling Stone.* https://www.rollingstone.com/music/music-news/sex-scandal-and-the-marching-band-inside-the-new-rules-at-ohio-state-32010/

Tinto, V. (2012). *Completing college: Rethinking institutional action*. Chicago: The University of Chicago Press.

Torres, V., Jones, S., & Renn, R. (2009). Identity Development Theories in Student Affairs: Origins, Current Status, and New Approaches. *Journal of College Student Development, 50*(6), 577–596.

Treviño, J. G. (1992). *Participation in ethnic/racial student organizations* (Doctoral Dissertation – University of California, Los Angeles). ProQuest Dissertations Publishing (Publication No. 9301586).

Turino, Thomas. (2008). *Music as Social Life: The Politics of Participation*. Chicago: University of Chicago Press.

Tuskegee marching band threatens boycott: 'We will no longer allow ourselves to be exploited.' (2021, October 7). *HBCU Sports*. https://bit.ly/3pSBsN2

Tyson, C. (2014, July 28). Are college marching bands hotbeds of hazing? *Inside Higher Ed.* https://www.insidehighered.com/print/news/2014/07/28/are-college-marching-bands-hotbeds-hazing

Ward, L., Siegel, M. J., Davenport, Z., & Gardner, J. (2012). *First-generation college students: Understanding and improving the experience from recruitment to commencement*. San Francisco: Jossey-Bass.

Warfield, D. A. (2013). *Perceptions of student section leaders in selected collegiate marching bands* (Doctoral Dissertation – The University of Iowa). ProQuest Dissertations Publishing (Publication No. 3608799).

Whipple, E. G., & Sullivan, E. G. (1998). Greek Letter Organizations: Communities of Learners?. *New Directions for Student Services,* 81, 7–17.

Williams, M. & Winston, Jr., R. B. (1985). Participation in organized student activities and work: Differences in developmental task achievement of traditional aged college students. *NASPA Journal, 22*(3), 52–59.

Wilson, E. K. (1966). The entering student: Attributes and agents of change. *College Peer Groups*, 71–106.

Wilson, J. D. (1999). *The impact of involvement in campus organizations on student satisfaction, skill development, and perceived personal change* (Doctoral Dissertation – University of Georgia). ProQuest Dissertations Publishing (Publication No. 9975119).

Winston, R. B. (1990). The Student Developmental Task and Life Inventory: An Approach to Measuring Students' Psychosocial Development. *Journal of College Student Development, 31*(2), 108–20.

Young, S. (2001). *Nonmusic majors who persist in selected college marching bands: Demographic characteristics, and Myers-Briggs personality types* (Doctoral Dissertation – University of Missouri, Columbia). ProQuest Dissertations Publishing (Publication No. 3013045).

Zacherman, A., & Foubert, J. (2014). The relationship between engagement in cocurricular activities and academic performance: Exploring gender differences. *Journal of Student Affairs Research and Practice*, *51*(2), 157–169.

CURRICULUM VITAE