

FRATERNAL MUSIC ORGANIZATIONS AND THEIR IMPACT ON STUDENT  
LEADERSHIP IN COLLEGE BANDS

by

NICHOLAS O'BRIAN BRATCHER

(Under the Direction of Mary Leglar)

ABSTRACT

College fraternities and sororities have become cornerstones of undergraduate college life and can be found on the vast majority of college and university campuses in the United States. Among these are fraternal music organizations (FMOs), which introduce undergraduate band students to the fraternal music experience. Many college band directors are “stakeholders” in these organizations, counting on them to develop student leadership in the band members.

The purpose of this study was to investigate the nature and function of fraternal music organizations (FMOs) and their influence on student leadership in college and university bands. Three questions guided the study: (1) does the proportion of student bandleaders who are part of an FMO differ from 50%? (2) When the student attributes of gender and class standing are controlled for, is there an association between leadership qualities and FMO participation? (3) With students nested in colleges, is there a difference in leadership qualities between colleges?

In addressing data gathered by means of a research survey, a quantitative, correlational design was used to examine the relationship between student traits (gender, class standing, and FMO participation) and leadership as measured by A.M. Black's (2006) Leadership Measurement Instrument (BLMI) at three levels (individual, organizational, and community). The BLMI was found to be highly reliable and valid, and effectively measured the outcomes of FMOs on the students' bandleader experience. The population was a total of 152 colleges and universities housing at least two recognized FMOs. The student population within the schools consisted of undergraduate students who held leadership positions in a band ensemble.

Findings indicated that: (1) the proportion of FMO student bandleaders was significantly greater than 50%. (2) There was a significant positive relationship between FMO participation and individual leadership scores, organizational leadership scores, and community leadership scores. (3) There was a statistically positive significant difference between mean score variance of student individual and organizational leadership qualities between colleges, but not sufficient evidence of variance between mean scores of student college leadership quality levels between colleges.

INDEX WORDS: Black's Leadership Measurement Instrument, Fraternal Music Organization, College Band, Student Bandleader, Student Traits

FRATERNAL MUSIC ORGANIZATIONS AND THEIR IMPACT ON STUDENT  
LEADERSHIP IN COLLEGE BANDS

by

NICHOLAS O'BRIAN BRATCHER

B.A. Coastal Carolina University, 2008

M.A.T. Coastal Carolina University, 2009

A Dissertation Submitted to the Graduate Faculty of The University of Georgia in Partial  
Fulfillment of the Requirements for the Degree

DOCTOR OF EDUCATION

ATHENS, GEORGIA

2015

© 2015

Nicholas O'Brian Bratcher

All Rights Reserved

FRATERNAL MUSIC ORGANIZATIONS AND THEIR IMPACT ON STUDENT  
LEADERSHIP IN COLLEGE BANDS

by

NICHOLAS O'BRIAN BRATCHER

Major Professor: Mary Leglar

Committee: Roy Kennedy  
Stephen Valdez

Electronic Version Approved:

Suzanne Barbour  
Dean of the Graduate School  
The University of Georgia  
December 2015

## DEDICATION

This is dedicated to Mom, Dad, Derrick, and my family and friends who have supported my growth and development in this journey.

## ACKNOWLEDGEMENTS

I could not have finished this academic journey without the help and support of many people. Throughout this process, I've never felt like I had to travel this path alone. For all of you, I am extremely grateful.

I wish to show my appreciation to my advisor, Dr. Mary Leglar, for all of her patience, support, and guidance. A huge thanks goes to Dr. John Lynch for his encouragement, knowledge, and enthusiasm for the kid who drove four hours from Savannah to Athens each week just to study conducting. Thank you Dr. Stephen Valdez and Dr. Roy Kennedy for supporting me throughout this entire process. It's been a pleasure to learn from both of you. Thank you to Charles Schwartz and Elaine Eisenbeisz, who provided consulting on the survey instrument and statistics. Thank you to Arthur Wright, III for giving me the chance to aspire to something greater than myself.

To my music teachers: Jeffrey Dennison, Lucius Campbell, Robert Lawrence, Jason Barr, Leslie McIver, Kenneth McIver, Cheryl Polenick, Eddie Ellis, Jim and Amy Tully, and Richard Johnson. You gave me the motivation and drive to keep going, and I am forever grateful.

I wish to acknowledge true heroes during this journey...the many fraternity members, many of whom are band directors, who allowed me to spend countless days and hours on a sofa or bed in order to rest in between travels, or just lent an ear when I felt I had lost my way. Thank you so very much!

Finally, thank you to my brother, Derrick, for his support. Mom and Dad thanks for putting up with the long hours of practice in the house, the carpools to band rehearsal, and the never ending support at football games, concerts, and festivals. This one's for you!

## TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS.....	v
LIST OF TABLES.....	viii
CHAPTER	
1 INTRODUCTION.....	1
Overview.....	1
Purpose of the Study.....	2
Delimitations of the Study.....	4
2 REVIEW OF RELATED LITERATURE.....	8
Student Leadership in Band Programs.....	8
Leadership and Group Organization.....	11
Leadership Evaluation and EvaluLEAD.....	12
Greek Fraternities and Sororities.....	12
Evolution of Fraternal Music Organizations.....	15
3 METHODOLOGY.....	22
Data Analysis.....	29
Ethical Considerations.....	31
Summary.....	32
4 RESULTS.....	33
Purpose of the Study.....	33
Population and Descriptive Findings.....	35
Instrumentation Constructs and Reliability.....	38



Assumptions.....	40
Correlational Analysis.....	42
Sign Test.....	44
Hierarchical Linear Models.....	44
Questions and Hypotheses.....	55
Summary.....	58
5 SUMMARY AND CONCLUSIONS.....	60
Research Question Analysis.....	64
Implications.....	66
Discussion on Limitations.....	67
Suggestions for Future Research.....	67
REFERENCES.....	69
APPENDICES.....	75
A INTRODUCTION TO ELECTRONIC SURVEY.....	75
B LETTER TO COLLEGE BAND DIRECTORS.....	76
C CONSENT LETTER.....	77
D SURVEY INSTRUMENT.....	78
E TOTAL STUDENT RESPONSE FREQUENCIES.....	82
F STUDENT RESPONSE FREQUENCIES BY LEVEL.....	85
Level One: Individual.....	85
Level Two: Organizational.....	91
Level Three: Community.....	97

## LIST OF TABLES

	Page
Table 1: Frequencies and Percentages of Descriptive Variables of Study.....	36
Table 2: Measures of Central Tendency and Cronbach's Alpha Coefficients for the Variable Constructs of BLMI.....	39
Table 3: Correlation Coefficients of the Variables used in Hypothesis Testing.....	43
Table 4: Results of Two-Level Model of Individual Leadership.....	47
Table 5: Results of Two-Level Model of Organizational Leadership.....	50
Table 6: Results of Two-Level Model of Community Leadership.....	53

## CHAPTER 1

### INTRODUCTION

#### Overview

College fraternities and sororities have become cornerstones of undergraduate college life throughout the century and can be found on the vast majority of college and university campuses in the United States. A number of scholarly writings on Greek life (Bowen, 1977; Astin, 1985; Bok, 1986; Edgerton, 1986) cite fraternities and sororities as a primary means of fostering student development, converting students from passive to active learners, learning leadership skills, and developing capacities for cooperative effort through teamwork.

Many academically affiliated fraternal organizations have also been established, not only to provide a networking outlet for college students, but also to help provide a supporting outlet for the development and cultivation of character and leadership. Towards the end of the 19th century to the middle of the 20th century, students on college campuses established several fraternal organizations devoted to the advancement of music (FMOs) across the country. The most prominent include Kappa Kappa Psi, Tau Beta Sigma, Phi Mu Alpha, Sigma Alpha Iota, Mu Phi Epsilon, and Delta Omicron.

#### Need for the Study

With FMOs now spanning the country on approximately 200 college campuses, many undergraduate college band students are exposed, either through direct participation or student life exposure, to the fraternal music experience. Additionally, many college band directors serve as “stakeholders” with these organizations, and serve as faculty advisors and sponsors, while counting on the programs to be effective in developing leadership in their band students.

Although the director traditionally functions as “a strong, charismatic, autocratic leader with great

skill of knowledge” (Wis, 2007), the students also serve in leadership capacities. Student leaders facilitate many functions of the rehearsal and performance by fulfilling tasks designated by the conductor/director, and they serve as performance and behavior models for the ensembles. The director’s ability to select the right student leaders is very important to the band’s success (Raxsdale, 1985).

Despite the ubiquity of FMOs and the acknowledged importance of leadership development in college band programs, little research has been done to determine the effectiveness of FMOs on leadership development or to quantify the program outcomes for effectiveness over a period of time.

### Purpose of the Study

The purpose of the study was to investigate the nature and function of fraternal music organizations (FMOs) and their influence on student leadership in college and university bands.

### Research Questions

The study was guided by the following research questions:

Research Question 1 (RQ1):

Does the proportion of student bandleaders who are part of an FMO differ from 50%?

Null Hypothesis 1 (H01): Proportion of FMO student bandleaders does not show a statistically significant difference from 50%.

Alternative Hypothesis 1 (HA1): Proportion of FMO student bandleaders shows a statistically significant difference from 50%.

Research Question 2 (RQ2):

Is there an association between leadership qualities and FMO participation while controlling for the student attributes of gender and class standing?

Null Hypothesis 2a (H02a): There is not a statistically significant relationship between individual leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2a (HA2a): There is a statistically significant relationship between individual leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Null Hypothesis 2b (H02b): There is not a statistically significant relationship between organizational leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2b (HA2b): There is a statistically significant relationship between organizational leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Null Hypothesis 2c (H02c): There is not a statistically significant relationship between college leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2c (HA2c): There is a statistically significant relationship between college leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Research Question 3 (RQ3):

With students nested in colleges, is there a difference in leadership qualities between colleges?

Null Hypothesis 3a (H03a): There is not a statistically significant difference in the variance between intercepts (mean scores) of student individual leadership quality levels between colleges.

Alternative Hypothesis 3a (HA3a): There is a statistically significant difference in the variance between intercepts (mean scores) of student individual leadership quality levels between colleges.

Null Hypothesis 3b (H03b): There is not a statistically significant difference in the variance between intercepts (mean scores) of student organizational leadership quality levels between colleges.

Alternative Hypothesis 3b (HA3b): There is a statistically significant difference in the variance between intercepts (mean scores) of student organizational leadership quality levels between colleges.

Null Hypothesis 3c (H03c): There is not a statistically significant difference in the variance between intercepts (mean scores) of student college leadership quality levels between colleges.

Alternative Hypothesis 3c (HA3c): There is a statistically significant difference in the variance between intercepts (mean scores) of student college leadership quality levels between colleges.

#### Delimitations of the Study

The population for the study was derived from 152 colleges and universities throughout the United States housing at least two of the following fraternal music organizations actively on their campus:

1. Kappa Kappa Psi
2. Tau Beta Sigma
3. Phi Mu Alpha
4. Sigma Alpha Iota
5. Mu Phi Epsilon
6. Delta Omicron

The sub-population consisted of undergraduate students holding student leadership positions in a band ensemble at a college or university that met the group criteria. Therefore, the results of the study are limited to the accessible population of student bandleaders who may or may not hold membership in an FMO and the colleges that meet the criteria; and cannot be generalized to all students or colleges. The results are also limited by the memory of the students participating in the study.

## Definitions

- Leadership – “Leadership is an influence relationship among leaders and followers who intend real change that reflects their mutual purpose” Rost (1993, p. 102).
- Black’s Leadership Measurement Instrument (BLMI) – A framework developed by Alice Black to quantify the complex results of leadership development programs where participants’ performances and experiences are brought together and evaluated through several different lenses (Black, 2006).
- Individual outcomes – The individual domain is where most of the direct benefits of leadership development occur and where the most program-associated results might be expected (Grove et al., 2005).
- Organizational outcomes – Program associated results that occur within the organizations where the program participants work (Grove et al., 2005).
- Societal/community outcomes – The societal/community level of outcomes is the community where the program participants have influence either individually, directly or indirectly through the organizations with which they work or are affiliated. Grove et al. (2005) calls the mission or “reason for being” for most leadership development programs is to influence this domain (Grove et al., 2005, p. 9).
- College band – any performance ensemble consisting of wind and percussion instruments housed at a four-year or two-year institution of higher learning. May include: *wind ensemble, wind symphony, marching band, pep band, concert band*, and other similar nominal descriptions.
- Fraternity – denotes a fraternal organization with membership usually consisting of entirely men.
- Sorority – denotes a fraternal organization with membership usually consisting of entirely women.

- Co-educational – any fraternity or sorority whose membership consists of both men and women.
- Fraternal music organization (FMO) – for the purposes of this study, defined to include:
  - Kappa Kappa Psi – a national honorary band fraternity founded in 1919 in Stillwater, Oklahoma. It is now co-educational.
  - Tau Beta Sigma – a national honorary band sorority founded in 1946 in Lubbock, Texas. It is now co-educational.
  - Phi Mu Alpha – a social fraternity for men interested in music established in 1898 in Boston, Massachusetts.
  - Sigma Alpha Iota – an international music fraternity for women founded in 1903 in Ann Arbor, Michigan.
  - Mu Phi Epsilon – an international professional music fraternity founded in 1903 in Cincinnati, Ohio. It is now co-educational.
  - Delta Omicron – an international professional music honors fraternity founded in 1909 in Cincinnati, Ohio. It is now co-educational.
- Greek-letter organization (GLO) – any collegiate student organization that derives its name from letters of the Greek alphabet.
- Chapter – a student run, chartered branch of an FMO housed on a college campus.
- Active – a status given to a chapter in order to signify that it is approved by the national organization to regularly function and govern business.
- Inactive – a status given to a chapter in order to signify that it is not approved by the national organization to regularly function and govern business.
- National organization – the location where central business for the FMO on the national level is governed.



### Organization of the Study

The study is presented in five chapters:

Chapter I	Introduction and Overview
Chapter II	Related Literature
Chapter III	Methodology
Chapter IV	Findings
Chapter V	Discussion, Conclusions, and Suggestions for Further Study

## CHAPTER 2

### REVIEW OF RELATED LITERATURE

This chapter provides a foundation for understanding Greek letter fraternal music organizations and how involvement in these organizations develops student leadership in college band ensembles. First is an examination of literature that relates to leadership in college band ensembles, the concept of leadership and group organizational studies, and the concept of the EvaluLEAD framework for assessing leadership development. Next, literature pertaining to Greek fraternity/sorority impact on student performance is explored. Last is a thorough review of the evolution of Greek letter organizations and their effect on student involvement. Specific attention was focused on college fraternal music organizations.

#### Student Leadership in Band Programs

Leadership development has traditionally been an important concern in music education (Shieh, 2008). Any successful ensemble is made up of a strong director and a committed group of responsible and dedicated student leaders (Lautzenheiser, 2005). The selection of student leaders may be the most important decision directors make in a given year (Rush, 2006). Indeed, many agree that student leaders are the power behind an ensemble; they are the ones who get the job done (Taylor, 2008).

However, leadership in band programs can be a difficult decision, as effective leadership can be the positive or negative determining factor in the morale of a band program. Beyond the morale factors involved are those concerning the musical leadership these individuals can supply by example. Leaders are important not just for developing abilities, but for providing role models for younger players (Criss, 2010). While it is essential that these individuals exhibit superior ability on their respective instruments, it is also vital that they be respected (Otto, 1971).

Therefore it is important to select students of good character with a sense of responsibility (Dunnigan, 1998).

Responsible student leaders can relieve directors of some routine tasks and thereby not only free the directors to concentrate on teaching but also develop their own leadership abilities. According to Patrick Dunnigan (1998), directors face an onslaught of administrative tasks, and a clear plan of attack is essential. Dunnigan (1998) goes on to suggest that active students become student leaders to help run the organization and reduce the director's administrative load. Even if a hired adult band staff could fulfill the tasks given to student leadership, students develop a greater sense of pride when everyone shares in the work, thus leading to a better performance (Dunnigan, 1998; Lee, 1955; Rush, 2006). Buyer (2009) quotes Frank Wickes, former director of bands at Louisiana State University, saying, "Having [the students] take ownership in the band and exhibit the pride that they feel as leaders is what [directors] want them to experience." The benefits of student leadership in band are noted in other cultures such as Japanese band programs. According to Tim Wilson, the best of the Japanese bands are successful because students take a prominent role in the organization, preparation, and administration of the ensemble (Wilson, 1986).

#### Positions of Student Leadership in College Bands

Lee (1955), Otto (1971), and Duvall (1960) mention the leadership positions held in high school band programs; these leadership positions are the same for most traditional college bands across the country. Duvall (1960) lists the leadership positions for a band program as follows: manager, librarian, quartermaster, drum major, student leader (conductor), section leader, and principal player (concert and jazz ensembles). In addition to the above, Lee (1955) and Otto (1971) state that a band executive council consisting of a band president, vice-president, secretary, and treasurer is common and also warranted. The descriptions and responsibilities for the above are as follows:

- Manager – supervises the physical set-up of the rehearsal room through the use of a seating chart, assists in planning [logistics], takes charge of special equipment used in connection with football and marching band activities, and generally assists the director (Otto, 1971).
- Librarian – records, stamps, and files all new music. Issues music as needed for rehearsals through distribution of same in band folders, and collects and refiles all music after use. Additional duties include maintaining the master index, and preparing and distributing new folders when needed (Otto, 1971).
- Quartermaster – maintains numerical lists of uniforms assigned to members, distributes and collects uniforms, maintains the condition of the uniform room, and reports the need for repair and replacement of uniforms and accessories (Otto, 1971).
- Drum major – leads the marching band, assists in planning of marching band appearances, and assists in teaching routines (Otto, 1971).
- Student leader (conductor) – begins rehearsal warm-up procedures when the director is detained, assists in conducting the band on the field and in concert at the invitation of the director or his assistant, and stands ready to function with the “pep band” at rallies (Otto, 1971).
- Section leader – sees that the section has proper equipment and can perform properly, sets an example for the section, has as a goal to make his/her section the best in the band, instructs all members of the section, and maintains discipline (Lee, 1955).
- Principal Player (first chair) – often chosen by audition as the top player in his/her section; serves to enhance morale of section through behavior and performance (Otto, 1971; Duvall, 1960).
- Band council:
  - Band president – conducts business meetings of the student population, promotes band activities, coordinates student officers, reports to director any problems or suggestions that may improve the band program (Lee, 1955).
  - Vice-president – is prepared to assume all duties of band president, serves as chair of committees as needed, assists the band president (Lee, 1955).
  - Secretary – handles band correspondence, mimeographing, record band activities and history; may keep attendance records (Lee, 1955).
  - Treasurer – handles financial matters, collects fees, keeps record of budget (Lee, 1955).

Although some college bands have additional positions, most of these bands have the standard positions as well (Duvall, 1960).

## Leadership and Group Organization

The term “leadership” can be analyzed rigorously only if the situation in which the leadership operates is specified (Olmstead, 1960). To circumvent this problem, Olmstead suggests developing a typology of individual leaders and groups. Are there types of leaders who function effectively in certain groups and in certain situations? Groups having several distinct goals or functions seem to be characterized by differentiated leadership functions, which may be fulfilled by one person or by several persons. Effectiveness results from differentiated leadership behavior (Olmstead, 1960).

Leadership plays an important role in helping people coordinate their abilities in organizations and groups (Barge, 1994). Leadership among students has been explored, facilitated, and taught among scholars and practitioners since the 1600s (Jones, 1938). Historically, people were placed in positions of authority on the basis of their credentials amid a group of followers. Some scholars find a correlation between personality characteristics and achieving prominence in leadership (Harms et al., 2006). During the past several decades, efforts on the part of social scientists to gain a fuller comprehension of the nature of communities have exhibited a curious gap: the failure to pay much attention to social-psychological facets of community life (Olmstead, 1960). Olmstead (1960) goes on to state that one can hardly study the sociological aspects of a community without becoming aware of the pervasiveness and centrality of social groups. Groups serve three basic functions:

1. Groups provide satisfactions and frustrations for individual members;
2. Groups can be viewed fruitfully as having different goals or functions from those of the individual members who participate in them;
3. Groups perform functions for the larger organizations and institutions in which they are embedded (Olmstead, 1960).

Humans have a need to belong, not to an undifferentiated mob, but to a handful of people with whom they can share their thoughts and feelings and with whom they can work to create

something of lasting value (Williamson, 1982). When considering the role that group leadership plays in the development of the individual, an evaluation of the entire group process is essential (Williamson, 1982).

### Leadership Evaluation and EvaluLEAD

Leadership development improves activities that “sustain the achievement of positive outcomes for organizations, communities and countries by individuals” (Grove & PLP Team, 2002, p. 2). It occurs through a variety of experiences with a important component being group processes: “Leadership is a result of the individual’s placement with and among others involved in actions oriented toward meaningful change” (Grove & PLP Team, 2002, p. 7). The EvaluLEAD framework allows for outcomes that will vary across many different program levels and concepts. The term “framework” is used instead of “model” to allow for flexibility in the EvaluLEAD application (Grove & PLP Team, 2002). Flexibility in application is important because one single model of evaluation cannot be applied across the many different contexts, goals, and outcomes of leadership development programs (Grove & PLP Team, 2002).

The EvaluLEAD framework surmises that evaluation of leadership development programs will lead to findings that could not be foreseen (Grove et al., 2005). Therefore, stakeholders will be able to be better informed about the program, and the program will produce better results. The framework seeks to determine program outcomes on three levels: individual, organizational, and societal/community.

### Greek Fraternities and Sororities

The American college fraternity is as old as the United States, dating to the founding of Phi Beta Kappa in 1776 at the College of William and Mary in Williamsburg, Virginia. Phi Beta Kappa, like the fraternal music organizations in this study, has many characteristics of the modern fraternal organization including “the charm and mystery of secrecy, ritual, oaths of fidelity, a grip, a motto, a badge, a background of high idealism, a strong tie of friendship and comradeship,

and an urge for showing its values through nationwide expansion” (Smith, 2011). Almost every fraternity founded since that time has followed this pattern, and almost every fraternity has a ritual which is frankly imitative of that used in Freemasonry (Baird, 1997). In the beginning, these organizations distinguished themselves by various combinations of Greek letters, and as a result, they are now popularly referred to as Greek letter fraternities and sororities.

Over time, women’s groups began to develop in colleges across the country. Although Alpha Delta Pi (1851) is counted as the first sisterhood, Kappa Alpha Theta, founded in 1870, is credited as the first Greek-letter society for women (Baird, 1997). There are currently four types of fraternal organizations on American campuses: general, professional, honor societies, and recognition societies; these will be discussed in detail later in this chapter.

#### The Value of Greek Letter Organizations

At the height of the 19th century, the fraternal movement established itself as a resistance to the academy and an outlet for college student life (Cory, 2011). According to several historians, fraternities provided a social alternative for college students despite the rigorous academic requirements at the time (Anson & Marchesani, 1991). Many of these social outlets were the result of dissatisfaction with the prevailing methods of teaching, the intrusive forms of discipline imposed by the faculty, and the power and control of the faculty imposed, in part, by the limited curriculum prescribed by the college at the time (Komives & Woodard, 2003). Historically, early fraternal founders sought to “redefine the American college” and “change the focus [of a college education] from the next world to this one. Their instrument was the Greek-letter fraternity movement” (Rudolph, 1962, p.144).

During the late 19th century, many underdeveloped college towns turned to Greek-letter organizations to provide living accommodations for students. In many cases, administrations welcomed the growth of fraternal organizations under the condition that they build housing for students (Carmines & Stimson, 1989).

In modern times, the presence of social fraternities and sororities on campuses is consistently being questioned by university leadership (Gregory, 2003). In the past three decades, fraternal organizations have struggled to overcome scathing criticisms and have since become a growing interest in academic research (Cory, 2011). There is some evidence that fraternal organizations contribute negatively to student development by encouraging behaviors such as alcohol and drug abuse (Eberhart, Rice, & Smith, 2003; Park, Sher & Krill, 2009; Wechsler, 1996), irresponsible and negligent behavior (which sometimes results in personal injuries), hazing (Drout & Corsoro, 2003), poor academic performance, racial bigotry, sexual promiscuity (Eberhart et al., 2003), disruption of residential neighborhoods (Winston, 1987), and academic dishonesty (Eberhart et al., 2003; McCabe & Bowers, 1996). Fraternities and sororities have received increasing amounts of negative publicity, causing many, especially in higher education, to question their value (Childs, 1993; Milloy, 1993).

However, many scholars view Greek organizations as important vehicles of student leadership (Kimborough & Hutcheson, 1998), although some have argued that they facilitate a perpetual cycle that creates leadership opportunities for their own members while excluding others from similar opportunities (Horowitz, 1987; Shaffer, 1983). Positive findings for fraternal organizations include better involvement and interaction with peers and groups (Asel, Pascarella, & Siefert, 2009; Astin, 1993; Pascarella & Terenzini, 2005; Pike, 2003; Pike & Askew, 1990; Thorsen, 1997), retention (Astin, 1993; Tinto, 1988; Washington State University, 2008), residential living and learning communities (Blackburn & Janosik, 2009), the relationship to engagement in educationally effective practices (Hayek, Carini, O'Day, & Kuh, 2002; Pike, 2003), and the positive impact of fraternity and sorority affiliation on learning outcomes (Center for Learning Outcomes and Assessment, 2009). It is also argued that fraternity and sorority students report greater satisfaction with the collegiate experience (National Panhellenic Conference, 2001) and loyalty to their alma mater (Thorsen, 1997). In addition, leadership development has long been touted as the hallmark of Greek letter organizations and suggested as



the best rationale for their existence on college campuses (Harms, Woods, Roberts, Bureau, & Green, 2006; Kelly, 2008). A review of the mission and purpose statements, websites, and print materials produced by fraternal organizations provides insight into the value they place on leadership development (Cory, 2011). Today, many argue that fraternities and sororities are an integral part of student life (Asel, Selfert, & Pascarella, 2009). According to Winston & Sanders (1987), there is little evidence that Greek societies inhibit or block development. Numerous studies have found that members of fraternities and sororities are much more likely to remain in college and ultimately to receive a bachelor's degree (Winston, 1987), and the literature clearly states that Greeks tend to exhibit more developed leadership skills (Dollar, 1966; Astin, 1977). The current upsurge in popularity of fraternities and sororities offers powerful testimony that the Greek experience allows students to make an active commitment to their college education experience through the organizations' shared histories, traditions, missions, rituals, and lifestyles (Winston, 1987).

### Evolution of Fraternal Music Organizations

#### Professional Fraternities

By 1870 professional schools were being established by many universities, and with them fraternities were founded which restricted their membership to students pursuing the same courses of study. These societies became known as professional fraternities to distinguish them from social fraternities (Baird, 1997). The professional fraternity provides many of the advantages of social fraternities, yet offers the real benefits that accrue to a membership comprised exclusively of those who have chosen the same profession for their life work. Professional fraternity chapters have strong faculty support because they offer association with members in their chosen profession (Baird, 1997). For the purposes of this study, and in accordance with the fraternal music organizations' various structures, the researcher has

categorized Sigma Alpha Iota, Delta Omicron, and Mu Phi Epsilon as “professional” music fraternal organizations.

### Sigma Alpha Iota

Sigma Alpha Iota was founded on June 12, 1903, at the University Of Michigan School Of Music in Ann Arbor by seven women. The second chapter of the fraternity was chartered in 1904 at Northwestern University at Evanston, Illinois. Chapters have now been chartered at over 300 universities, conservatories, and colleges. Membership at the collegiate level is composed of women who either major or minor in music. Since the Title IX Educational Amendment of 1972, Sigma Alpha Iota has remained a fraternity of women that would initiate only women at the undergraduate level. Membership privileges and responsibilities include opportunities for leadership training in the chapter guided by national policies and instructional materials and the practice of ethicality at all times (SAI History, 2014).

### Delta Omicron

Delta Omicron International Music Fraternity is a professional fraternity in the field of music with collegiate chapters established throughout the United States and abroad. Three undergraduate students founded the fraternity in 1909 at the Cincinnati Conservatory of Music. Delta Omicron is the only organization of its kind founded by students for students. From 1909 to the present, twenty-six Delta Omicron national presidents have guided the fraternity to achieve and fulfill its purposes and objectives, one of which is to develop character and leadership. The mission of Delta Omicron International Music Fraternity is to promote and support excellence in music and musicianship (History and Information, 2014).

### Mu Phi Epsilon

Mu Phi Epsilon is an international professional music fraternity whose aims are the advancement of music throughout the world, the promotion of musicianship and scholarship, loyalty to the alma mater, and the development of a true bond of friendship. Mu Phi Epsilon was

founded at the Metropolitan College of Music in Cincinnati, Ohio, on November 13, 1903, by Professor Winthrop S. Sterling, dean of the college, and Elizabeth Mathias, a member of the faculty. Professor Sterling had in mind an organization for women comparable in aim to Phi Mu Alpha Sinfonia Music Fraternity for men. First he considered associate membership in Phi Mu Alpha, but decided to establish an organization for women only, to advance the cause of music in America and at the same time develop fine young women bound together in friendship through their common interest in the art of music. The sorority was expanded within a month with the installation of the Beta Chapter at the New England Conservatory, Boston, December 13, 1903. Mu Phi Epsilon was opened to men in 1977, in compliance with federal regulations of Title IX of the Education Amendments Act of 1972. Since its beginning, Mu Phi Epsilon has installed more than 210 chapters at colleges nationwide (Welcome to Mu Phi Epsilon, 2014).

### General Fraternities

General fraternities are commonly called “social” fraternities, but while the initial use of the term social referred to social development, the term has been mistakenly thought to refer to social functions by members and non-members alike. Actually, the intent was to suggest that a student needed to be “socialized,” that is, directed toward a proper consideration of one’s future responsibilities in society (Baird, 1997). A general fraternity selects its members at large from the undergraduate student body. They are mutually exclusive self-perpetuating groups, which organize the social life of their members in colleges and universities as a contributing factor to their educational program (Baird, 1997). For the purposes of this study, and in accordance with the fraternal music organizations’ various structures, the researcher has categorized Phi Mu Alpha as a “social” music fraternity.

### Phi Mu Alpha

Phi Mu Alpha, commonly known as “Sinfonia,” is the world’s oldest and largest secret national fraternal society in music (Phi Mu Alpha Sinfonia, 2014). Sinfonia was established on

October 6, 1898, at the New England Conservatory in Boston, when a group of thirteen young men under the guidance of Ossian Everett Mills decided “to consider the social life of the young men students of that institution [and] to devise ways and means by which it might be improved” (Phi Mu Alpha Sinfonia, 2014). Sinfonia became a national fraternity on October 6, 1900, with the admission of a group of men at the Broad Street Conservatory in Philadelphia. For over a century, Sinfonians in nearly every field of study and professional endeavor have transformed music in America. The opportunity of becoming a Sinfonian is offered to as many men as possible who, through a love for music, can assist in the fulfillment of the fraternity’s objectives and ideals, either by adopting music as a profession or by working to advance the cause of music in America. One of Sinfonia’s core values is to “develop character and ideals in ourselves and in our brothers” (Phi Mu Alpha Sinfonia, 2014).

### Recognition Societies

Recognition societies are organizations that confer membership in recognition of a student’s interest and participation in some field of collegiate study. They have more liberal membership requirements than those prescribed by honor societies (Baird, 1997). For the purposes of this study, and in accordance with the fraternal music organizations’ structure, the researcher has categorized Kappa Kappa Psi and Tau Beta Sigma as “recognition societies” for music.

### Kappa Kappa Psi

Kappa Kappa Psi is a fraternity for college and university band members in the United States. William A. Scroggs, a student at Oklahoma A&M College, sought to establish an organization that would “bind [dear] friendship together indefinitely” and unite members across colleges and universities (Isenberg, 1922). After some initial planning, he consulted band president A. Frank Martin and Bohumil Makovsky, director of bands at Oklahoma A&M, both of whom agreed to help with the creation of the fraternity. From Makovsky's band, 10 members

were selected as the first members of Kappa Kappa Psi. William A. Scroggs, one of the initiated ten bandmen, served as president (Isenberg, 1922). Kappa Kappa Psi was founded on November 27, 1919, at Oklahoma Agricultural & Mechanical College, now known as Oklahoma State University, in Stillwater, Oklahoma. Kappa Kappa Psi primarily operates as a recognition society providing service, leadership opportunities, and social programming for band members. Since 1919 more than 66,000 men and women have been initiated into Kappa Kappa Psi, with nearly 6,000 collegiate members active today (Golemo, 2005).

### Tau Beta Sigma

Tau Beta Sigma is a women's national honorary band sorority dedicated to serving college and university bands. The sorority, headquartered at the historic Stillwater Station in Stillwater, Oklahoma, numbers over 3,500 active members in 145 active chapters, and over 40,000 alumni. Since 1947, Tau Beta Sigma has been recognized by Kappa Kappa Psi as “an equal affiliated organization with a parallel purpose, function and role in the college and university band setting” (Tau Beta Sigma History, 2010), and the two organizations hold joint conventions.

Tau Beta Sigma was founded at Texas Technological College (now Texas Tech University) by Wava Banes Turner Henry. Due to corporation laws in the state of Texas at the time, however, the Texas Tech sisters surrendered their name, ritual, jewelry, constitution and Alpha chapter designation in January of 1946 to the local band sorority at Oklahoma State University (Tau Beta Sigma History, 2010). The Alpha chapter of Tau Beta Sigma was installed at OSU on March 26, 1946. This had the additional effect of locating both of the Alpha chapters of Tau Beta Sigma and Kappa Kappa Psi at the same school. Later, on May 4, 1946, the Beta chapter of Tau Beta Sigma was founded at Texas Tech. One of the key components of Tau Beta Sigma is cultivating leadership among college band students (Tau Beta Sigma History, 2010).

## Summary

Student leadership is essential to the success of any ensemble (Lautzenheiser, 2005). Many college band programs utilize students in leadership positions in order to facilitate the operations of the college band program and increase the overall student morale of the organization (Dunnigan, 1998). Since the late 1800s, music organizations under the designations of Greek letter fraternities have dedicated their purposes and mission to the advancement of music in some capacity, and the development of musicianship, leadership, and character (Delta Omicron, 2014; Kappa Kappa Psi, 2011; Mu Phi Epsilon, 2014; Phi Mu Alpha, 2014; Sigma Alpha Iota, 2014; Tau Beta Sigma, 2010). College band programs across the country now house the most prominent of these fraternal music organizations.

Studies of Greek-letter organizations have since shown increased leadership skills in their members (Dollar, 1966; Astin, 1977). They market their ability to develop these leadership skills through participation in organizational leadership roles (Harms et al., 2006). Fraternal music organizations provide various avenues for students to enhance their leadership skills in college band programs by incorporating idealistic goals and principles that aid in cultivating character and leadership.

A review of the literature provides a context for the importance of researching student leadership development in college bands as a result of involvement with fraternal music organizations, and its impact on said ensembles. The EvaluLEAD Framework (Grove & PLP Team, 2002) presents one application with which to assess student leadership development by measuring outcomes in individual, group, and community domains. Leadership development outcomes in college bands as a result of FMO participation is limited in higher education research studies. Further research is needed in involvement and leadership skill development as a direct benefit of membership in an FMO. Therefore, documenting the presence of leadership

development outcomes resulting from a student's experience with a FMO and the impact such experiences have on leadership in a college band program is an area that warrants further study.

CHAPTER 3  
METHODOLOGY

The purpose of the study was to investigate the nature and function of fraternal music organizations (FMOs) and their influence on student leadership in college and university bands.

Research Questions

The study was guided by the following research questions:

Research Question 1 (RQ1):

Does the proportion of student bandleaders who are part of an FMO differ from 50%?

Null Hypothesis 1 (H01): Proportion of FMO student bandleaders does not show a statistically significant difference from 50%.

Alternative Hypothesis 1 (HA1): Proportion of FMO student bandleaders shows a statistically significant difference from 50%.

Research Question 2 (RQ2):

Is there an association between leadership qualities and FMO participation while controlling for the student attributes of gender and class standing)?

Null Hypothesis 2a (H02a): There is not a statistically significant relationship between individual leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2a (HA2a): There is a statistically significant relationship between individual leadership qualities and FMO participation while controlling for student attributes (gender and class standing).



Null Hypothesis 2b (H02b): There is not a statistically significant relationship between organizational leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2b (HA2b): There is a statistically significant relationship between organizational leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Null Hypothesis 2c (H02c): There is not a statistically significant relationship between college leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2c (HA2c): There is a statistically significant relationship between college leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Research Question 3 (RQ3):

With students nested in colleges, is there a difference in leadership qualities between colleges?

Null Hypothesis 3a (H03a): There is not a statistically significant difference in the variance between intercepts (mean scores) of student individual leadership quality levels between colleges.

Alternative Hypothesis 3a (HA3a): There is a statistically significant difference in the variance between intercepts (mean scores) of student individual leadership quality levels between colleges.

Null Hypothesis 3b (H03b): There is not a statistically significant difference in the variance between intercepts (mean scores) of student organizational leadership quality levels between colleges.

Alternative Hypothesis 3b (HA3b): There is a statistically significant difference in the variance between intercepts (mean scores) of student organizational leadership quality levels between colleges.

Null Hypothesis 3c (H03c): There is not a statistically significant difference in the variance between intercepts (mean scores) of student college leadership quality levels between colleges.

Alternative Hypothesis 3c (HA3c): There is a statistically significant difference in the variance between intercepts (mean scores) of student college leadership quality levels between colleges.

In addressing the research questions, a quantitative, correlational design was used to examine the relationship between student traits (gender, class standing, and FMO participation) and leadership as measured by Black's Leadership Measurement Instrument (BLMI) at three levels (individual, organizational, and community). A quantitative correlational research design was chosen because the study sought to investigate relationships between variables, including the strength and direction of variable association. A comprehensive rationale for choice of design is provided below.

Quantitative research examines relationships between measured variables with the intent of explaining, predicting, and controlling events (Leedy & Ormrod, 2005). A quantitative approach is appropriate because it focuses on direct responses without interpretation in order to reduce potential biases. According to Cooper and Schindler (2005), quantitative research involves using specific and narrow questions targeted toward measuring and explaining relationships between variables.

The two primary correlational designs of correlational research are explanatory and prediction (Creswell, 2009). Prediction design seeks to anticipate outcomes by using certain variables as predictors (Creswell, 2009), whereas explanatory correlational research design intends to investigate the extent to which two or more variables "co-vary," that is to say, "where changes in one variable are reflected in changes in the other" (Creswell, 2009, p. 327). An explanatory correlational research design was used for the present study, since the intent was to examine the relationship between variables rather than to anticipate outcomes.

## Population

The population used in this study was a total of  $N = 152$  (as measured in June 2014) colleges and universities housing at least two of the following six FMOs: (a) Kappa Kappa Psi, (b) Tau Beta Sigma, (c) Phi Mu Alpha, (d) Sigma Alpha Iota, (e) Mu Phi Epsilon, and (f) Delta Omicron.

The student population within the schools consisted of undergraduate students who held student leadership positions in a band ensemble at a college or university that met the group criteria.

## Power Analysis

Power analysis was performed to investigate the necessary sample required to power the hierarchical linear model (HLM). The power analysis was performed using the Optimal Design software for longitudinal and multilevel research (Version 3.01; Liu, Spybrook, Congdon, & Raudenbush, 2011). The power analysis was done using an alpha ( $\alpha$ ) of .05, a power of .80, an average total of 10 students sampled for each of the schools, and a medium effect size of delta ( $\delta$ ) = .50. According to the results, in order to account for an intra-class correlation between .20 and .30, a sample of between  $N = 39$  and  $N = 50$  colleges would be necessary to power the HLM. The medium effect size was chosen to be  $\delta = .50$  based on procedures set forth by Cohen (1988), who viewed standardized effect sizes of .20, .50, and .80 as small, medium, and large, respectively (Raudenbush & Liu, 2000).

Power analysis was also performed for a proportion: sign test using G\*Power version 3.1. For a two-sided test, an alpha of .05, a power of .80, and an effect size of  $g = .15$ , results showed the required sample size to be  $N = 90$ . The required sample size of students required to power the sign test for proportions ( $N = 90$ ) is less than the required sample size for the HLM analysis ( $N = 390$ ); therefore, the sample size for the HLM was collected in order to provide the necessary power for both analyses.

Every attempt was made to collect student data at  $N = 50$  colleges and universities (with an average of 10 students per college), or more. Since this was not possible (due to a lack of response from band directors), at least the required  $N = 39$  colleges and universities (with an average of 10 students per college) were sampled for analysis.

### Instrumentation

One instrument was used in the study: Black's Leadership Measurement Instrument (BLMI). The BLMI was developed by Alice Black (2006) as an instrument that can be used to quantify leadership qualities. The instrument was developed to quantitatively examine the relationship between Ohio's Leadership, Education and Development (LEAD) program and leadership levels of the participants of the program. Black (2006) noted that little had been done to determine the actual effects of these programs on the individual, organizational, and community levels. She also pointed out that even less had been done to "develop a form of measurement to identify agricultural leadership program outcomes" (Black, 2006, p. 6). Despite the different foci of the two studies, the BLMI was chosen based on Black's recommendation to use her instrument in similar studies (2006). In this instance, the BLMI was adapted to measure the relationship between membership in an FMO and leadership qualities exhibited by student bandleaders.

### Validity

As reported by Black (2006), a professional examined a draft of the instrument in order to collapse the questions and help ensure that all questions pertained to the given topic. A group of judges (directors of other statewide agricultural leadership programs) were then used to rate the items on a one-to-five scale to ensure face and content validity. The rating scale ranged from 1, strongly unfavorable to the concept, to 5, strongly favorable to the concept. The items that scored higher were deemed favorable to the concept, and were included as a scale item in the instrument. Validity was further ensured by a field test using twenty potential participants of another statewide agricultural leadership programs (Black, 2006). The test addressed clarity, face and

content validity, ease of use and appropriateness of the instrument, and the reliability of the instrument. Questions and comments from the field test group (containing  $n = 14$  respondents) were minimal; further, preliminary reliability analysis showed no need for the removal of any items.

### Reliability

Cronbach's alpha was calculated using the field test responses to test reliability (Black, 2006). It was found that all three constructs showed high alphas: individual level having an alpha of .90, organizational level having an alpha of .90, and community level having an alpha of .86. As cited by Black (2006), Gliem and Gliem (2003) state that alphas of .80 or greater are a reasonable goal, implying that each of the constructs have sufficient internal consistency reliability. For the adaptation of the BLMI to be used in this study, Cronbach's alpha was calculated using the sample for each of the three constructs to ensure the internal consistency reliability of this instrument was retained.

### Sampling Procedures

This study used a convenience sampling approach. Emails were sent to the entire population of 152 schools; therefore, participants were selected based on availability and willingness to participate in the study (Gravetter & Forzano, 2012). Willingness was established by contacting the band director at each institution. The necessary email addresses were acquired via college or university websites.

The initial emails included a copy of the consent form for the purpose of personal records (Appendix C). The consent form contained a description of the study and study goals and researcher contact information. The email was sent to 152 schools that met the inclusion criteria (housing at least two of the following six FMOs: (a) Kappa Kappa Psi, (b) Tau Beta Sigma, (c) Phi Mu Alpha, (d) Sigma Alpha Iota, (e) Mu Phi Epsilon, and (f) Delta Omicron). Band directors were asked to forward the email to their current student bandleaders and encourage them to participate in the study. A link to Survey Monkey, allowing the participants to complete the

BLMI online, was also included. Participants were asked to agree to the terms provided on the consent form. Participants had access to the researcher's contact information.

The researcher obtained an electronic version of the data from Survey Monkey, which was printed for retention purposes. Hard copies of the survey will be kept in a locked filing cabinet for seven years, after which time all hard copies will be destroyed. The electronic copies of the data will be kept confidential and password protected.

#### Operationalization of Variables

**Independent Variables:** The design utilized four independent variables: (a) gender, (b) class standing, (c) FMO participation, and (d) college. Their operationalization was as follows:

**Gender:** Gender was a dichotomous variable with two possible groups, (a) female and (b) male, with male being used as the reference group for analysis. Gender was used as a control variable.

**Class Standing:** Class standing was a categorical variable with four possible groups: (a) freshman, (b) sophomore, (c) junior, and (d) senior, with freshman being used as the reference group for analysis. Class standing was used as a control variable.

**FMO Participation:** FMO participation was a dichotomous variable with the two possible groups of: (a) FMO membership and (b) no FMO membership, with no FMO membership used as a reference in the HLM analysis.

**College:** College was a categorical variable which was dummy coded for each of the schools (0 = did not attend, 1 = attended). The college variable was included as a level 2 variable in the HLM model.

**Dependent Variables:** Three dependent variables were used in this study: (a) individual leadership, (b) organizational leadership, and (c) community leadership. The operationalization of these variables was as follows:

**Individual Leadership:** Individual leadership was a continuous variable ranging from 12 to 60. Individual leadership was measured using the individual construct of the BLMI. Individual leadership is a total of 12 items measured with a five-point Likert scale: (1) none/not at all, (2) a little, (3) some, (4) much, and (5) a great deal.

**Organizational Leadership:** Organizational leadership was a continuous variable ranging from 11 to 55. Organizational leadership was measured using the organizational construct of the BLMI. Organizational leadership was a total of 11 items measured using a five-point Likert scale having the following five scores: (1) none/not at all, (2) a little, (3) some, (4) much, and (5) a great deal.

**Community Leadership:** Community leadership was a continuous variable ranging from 8 to 40. Community leadership was measured using the community construct of the BLMI. Community leadership was a total of eight items measured using a five-point Likert scale: (1) none/not at all, (2) a little, (3) some, (4) much, and (5) a great deal.

### Data Analysis

All analysis was performed using IBM SPSS v. 22. Descriptive statistics included frequencies for gender, class standing, and FMO participation, as well as measures of central tendency, standard deviations, and score ranges, for individual leadership, organizational leadership, and community leadership. Inferential tests were performed at a .05 level of significance ( $\alpha = .05$ ).

### Analyses by Hypothesis

Hypothesis 1 was tested using a sign test for proportions. In testing the claim of the proportion being not equal to 50%, two assumptions must be followed: (1) the conditions of a binomial experiment are satisfied, and (2) the conditions  $np \geq 5$  and  $nq \geq 5$  (where  $n$  is the sample size,  $p$  is the proportion of student bandleaders in an FMO, and  $q$  is the proportion of student bandleaders not in an FMO; Triola, 1998). Using this method, the researcher was able to test the claim that the proportion of FMO participants who were student bandleaders was 50%.

Hypotheses 2 and 3 were tested using three separate hierarchical linear models (HLM). The three models all used the same independent variables (gender, class standing, FMO participation, and college) and the same structure, but each of the three HLMs used a different dependent variable (individual leadership, organizational leadership, and community leadership) for analysis. Prior to hypothesis testing, all assumptions required for an HLM (linearity of function forms at each level, normality at each level, homoscedasticity at level I, and independence at each level) were tested to ensure estimations provided from the models were suitable for the data. HLM is a powerful tool that allows for the accommodation of dependent observations and correlated residuals, while also providing analytical opportunities in the form of contextual variables and cross-level interaction terms (Bickel, 2007). HLM measures the nested effects of students within colleges, thus allowing observation of the effect of the colleges on students. For this study, the HLM was a two-level model. Level I represented the student bandleaders (includes variables gender, class standing, and FMO participation) and Level II represented the colleges using the following model (Leadership represents one of the three leadership constructs for the three separate HLMs to be used: individual leadership, organizational leadership, and community leadership):

Level I – Individual model for Leadership score for student i at college j

$$Y_{ij} = \beta_{0j} + \beta_{1j} (\text{Gender})_{1ij} + \beta_{2j} (\text{Class Standing})_{2ij} + \beta_{3j} (\text{FMO Participation})_{3ij} + r_{ij}$$

At Level II the coefficients are:

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

$$\beta_{1j} = \gamma_{10} + u_{1j}$$

$$\beta_{2j} = \gamma_{20} + u_{2j}$$

$$\beta_{3j} = \gamma_{30} + u_{3j}$$

### Defined Variables

$\beta_{0j}$  = the intercept for Leadership score in college j

$\beta_{1j}$  = the change in Leadership score for females compared to males within college j



$\beta_{2j}$  = the change in Leadership score for a class standing increase of 1 level within college j

$\beta_{3j}$  = the change in Leadership score for FMO students compared to non-FMO students within college j

$\gamma_{00}$  = the overall intercept; the grand mean of the Leadership scores across all colleges when all predictors = 0

$\gamma_{10}$  = the change in Leadership score for females compared to males for all colleges

$\gamma_{20}$  = the change in Leadership score for a class standing increase of 1 level for all colleges

$\gamma_{30}$  = the change in Leadership score for FMO students compared to non-FMO students for all colleges

$r_{ij}$  = the Level I random effect

$u_{0j}, u_{1j}, u_{2j}, u_{3j}$  = the Level II random effects

#### Ethical Considerations

Each participant was assigned a unique identifier to help assure the anonymity of participants. Names were confidential and were not reported with results. Documentation linking the identification number was kept on a password-protected computer to which only the researcher had access.

All University of Georgia Institutional Review Board (IRB) guidelines were followed throughout data collection, data analysis, and reporting for this study. A participation consent form was obtained before access to the instruments was provided. A copy of the consent form can be found in Appendix C. The demographic questionnaire and BLMI were considered only for those who agreed to the terms of the consent form. Participants were advised not to answer any questions causing discomfort. Participants were given the contact information of the researcher should they have any questions, wish to raise any concerns, or require any further information on the study. The contact information might also be used should the participant wish for information about results of the study.

All electronic copies of the data will remain password protected and all hardcopies will be kept in a locked filing cabinet for seven years following the study, in accordance with school guidelines.

### Summary

The purpose of the study was to investigate the influence of fraternal music organizations on student leadership in college and university bands. Using a quantitative, correlational design, leadership qualities were measured at three different levels (individual, organizational, and community) using Black's (2006) Leadership Measurement Instrument.

Hypothesis testing was performed using a sign test of proportions and a series of three hierarchical linear models (HLM) utilizing each of the three constructs of the BLMI (individual leadership, organizational leadership, and community leadership).

## CHAPTER 4

### RESULTS

The results of the research are divided into five sections (a) description of the population, (b) instrumentation and reliability, (c) investigation of assumptions as relates to inferential analysis, (d) inferential tests and findings, and (e) application of inferential tests to the research questions and hypotheses of the study. SPSS v.22 was used to provide all descriptive and inferential analyses. All inferential analyses were set at a 95% level of significance. A sign test for proportions was performed to address Research Question 1. Three separate hierarchical linear models were performed to address Research Question 2 and Research Question 3.

#### Purpose of the Study

The purpose of the study was to investigate the nature and function of fraternal music organizations (FMOs) and their influence on student leadership in college and university bands.

#### Research Questions

The study was guided by the following research questions:

Research Question 1 (RQ1):

Does the proportion of student bandleaders who are part of an FMO differ from 50%?

Null Hypothesis 1 (H01): Proportion of FMO student bandleaders does not show a statistically significant difference from 50%.

Alternative Hypothesis 1 (HA1): Proportion of FMO student bandleaders shows a statistically significant difference from 50%.

Research Question 2 (RQ2):

Is there an association between leadership qualities and FMO participation while controlling for the student attributes of gender and class standing)?

Null Hypothesis 2a (H02a): There is not a statistically significant relationship between individual leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2a (HA2a): There is a statistically significant relationship between individual leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Null Hypothesis 2b (H02b): There is not a statistically significant relationship between organizational leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2b (HA2b): There is a statistically significant relationship between organizational leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Null Hypothesis 2c (H02c): There is not a statistically significant relationship between college leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2c (HA2c): There is a statistically significant relationship between college leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Research Question 3 (RQ3):

With students nested in colleges, is there a difference in leadership qualities between colleges?

Null Hypothesis 3a (H03a): There is not a statistically significant difference in the variance between intercepts (mean scores) of student individual leadership quality levels between colleges.

Alternative Hypothesis 3a (HA3a): There is a statistically significant difference in the variance between intercepts (mean scores) of student individual leadership quality levels between colleges.

Null Hypothesis 3b (H03b): There is not a statistically significant difference in the variance between intercepts (mean scores) of student organizational leadership quality levels between colleges.

Alternative Hypothesis 3b (HA3b): There is a statistically significant difference in the variance between intercepts (mean scores) of student organizational leadership quality levels between colleges.

Null Hypothesis 3c (H03c): There is not a statistically significant difference in the variance between intercepts (mean scores) of student college leadership quality levels between colleges.

Alternative Hypothesis 3c (HA3c): There is a statistically significant difference in the variance between intercepts (mean scores) of student college leadership quality levels between colleges.

#### Population and Descriptive Findings

A total of three hierarchical linear models (HLMs), one model for each of the three variable constructs of the BLMI were tested for this study. Any student record that had a full set of items comprising at least one of the three variable constructs of the BLMI was retained for analysis.

Students were required to complete a consent form and an online survey in order to participate in this study. The students were almost evenly distributed between genders, with slightly more female participants (52.9%) than male participants (46.2%). The freshman class (5.9%) comprised the smallest group. The largest group was seniors (41.2%). Approximately two-thirds of the students (68.8%) participated in a fraternal music organization (FMO). The remaining one-third of the students (31.2%) did not, or failed to report. Table 1 presents the frequencies and percentages of all students included in this study.

Table 1

*Frequencies and Percentages of Descriptive Variables of Study (N = 340)*

Variable	Frequency	%
<b>Gender</b>		
Male	157	46.2
Female	180	52.9
Not reported	3	0.9
<b>Class Standing</b>		
Freshman	20	5.9
Sophomore	59	17.4
Junior	115	33.8
Senior	140	41.2
Not reported	6	1.8
<b>FMO Participation</b>		
Yes	234	68.8

---

No	103	30.3
Not reported	3	0.9

---

### Instrumentation Constructs and Reliability

The instrument utilized in this study was an adapted version of Black's Leadership Measurement Instrument (BLMI, see Appendix D). The BLMI was employed to examine the relationship between experience in a fraternal music organization (FMO) and the leadership levels of the FMO participants. The 31 items of the BLMI instrument were divided into three "levels." Each level functioned as a dependent variable in testing the hypotheses: (a) Individual Leadership, addressed in 12 level-1 items from the BLMI; (b) Organizational Leadership addressed in the 11 level-2 items from the BLMI; and (c) Community Leadership, addressed in the 8 level-3 items from the BLMI. Individual items were scored on a 5-point Likert scale ranging from 1 = None/Not At All to 5 = A Great Deal. The individual items of each level were summed to derive a total score. Higher total scores were indicative of increased leadership qualities due to FMO participation.

Table 2 presents information pertaining to the three variable constructs derived from the BLMI instrument (Appendix D) including (a) measures of central tendency for each of the three constructs, and (b) the Cronbach's coefficient alpha coefficients for each of the three constructs. Cronbach's coefficient alpha is a measure of internal consistency reliability. A Cronbach's coefficient alpha value of .70 or greater indicates good reliability of an instrument with the data collected (Field, 2005). The Cronbach's alpha values were above the .70 threshold. Therefore, the variable constructs had good internal consistency reliability with the data collected in this study.



Table 2

*Measures of Central Tendency and Cronbach's Alpha Coefficients for the Variable Constructs of BLMI (N = 284)*

Variable Construct	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	Sample Range	Cronbach's $\alpha$
<b>Individual Leadership</b>						
BLMI Level 1 Items 1-12	332	43.89	9.85	45.00	12 - 60	.917
<b>Organizational Leadership</b>						
BLMI Level 2 Items 1-11	309	38.33	9.10	39.00	11 - 55	.906
<b>Community Leadership</b>						
BLMI Level 3 Items 1-8	295	20.28	6.32	20.00	8 - 40	.817

*Note.* BLMI = Black's Leadership Measurement Instrument; *N* = Sample Size; *M* = Mean; *SD* = Standard Deviation; *Mdn* = Median.

### Assumptions

A sign test was used to address hypothesis testing associated with Research Question 1. A series of three hierarchical linear models (HLMs) were performed to address the hypotheses of Research Questions 2 and 3. The sign test requires the tested variable to follow a binomial distribution. The variable used to perform the sign test was FMO participation. FMO participation is a dichotomous variable with two possible values of “No” (coded as 0) and “Yes” (coded as 1). The dichotomous nature of this variable implied a binomial distribution. Therefore, the binomial distribution assumption for use of the sign test was met.

The three hierarchical linear models included two levels with students (level-1) nested within schools (level-2). The first HLM included the dependent variable of individual leadership. The second HLM included the dependent variable of organizational leadership. The third HLM included the dependent variable of community leadership. Assumptions for the use of HLM include normal distribution of the dependent variable assumption and an absence of multicollinearity between the independent variables (Tabachnick & Fidell, 2007, pp.786-789). Univariate normality for the dependent variables of (a) Individual Leadership, (b) Organizational Leadership, and (c) Community Leadership was investigated using SPSS Explore via a visual examination of the Normal Q-Q plots and histograms. A left skew was detected for both Individual Leadership and Organizational Leadership, while a slight right skew was detected for Community Leadership. Additionally, outliers were detected within the boxplots of (a) individual leadership (9 outliers, 3% of the records), (b) organizational leadership (9 outliers, 3% of the records), and (c) community leadership (5 outliers, 2% of the records). The mean and median for each of the dependent variables were similar in value, indicating that the skews and outliers were not affecting normality of the distribution of any of these three variables (see Table 2). Examination of the standardized values for the dependent variables indicated no extreme outliers, meaning that all standardized values for the outliers had absolute z-scores less than 3.3. It was

determined that outliers were not adversely affecting univariate normality. Therefore, the univariate normality assumption was met.

Multivariate normality was investigated by examining the distribution of residuals from the fitted HLMs. Examination of the Normal Q-Q plots and histograms for the residuals from level 1 and level 2 were examined for all three HLMs, and provided evidence to support the normality of the residuals at both levels for all three models. Additionally, homoscedasticity was checked at both levels of all three models via scatterplots of the standardized residuals versus the standardized predicted values. The scatterplots indicated no patterns for all three models at both levels, indicating homoscedasticity within the model fit. Therefore, the assumption of multivariate normality was met.

Multicollinearity between the independent variables was investigated using a series of bivariate Spearman's rank order correlation analyses. Multicollinearity is specified by a bivariate correlation of .90 or greater (Pallant, 2007). No violations were noted from the calculated bivariate Spearman's rank order correlations; therefore, the absence of multicollinearity assumption was met.

HLM can be used when data is missing, with the data being treated as missing at random (MAR; Tabachnick & Fidell, 2007). As mentioned previously, IBM SPSS v.22 offers the options of pairwise deletion and maximum likelihood estimation for missing values. In addition to accommodating for missing data, HLM also accommodates for an unequal number of nested cases within groups. Furthermore, independence of errors is not required or assumed within groups. HLMs often violate the assumption of independence of errors due to the influence of nesting (Tabachnick & Fidell, 2007). In this study, students were nested inside of schools, and it is reasonable to assume that students would have more in common with students within their school than students from another school. However, HLM accommodates this lack of independence within measurements.

### Correlational Analysis

Bivariate associations were examined for student level independent variables (FMO participation, gender, and class standing) and the dependent variables (Individual Leadership, Organizational Leadership, and Community Leadership) prior to building the hierarchical linear models. Pearson's product moment correlations were considered for correlational analysis. However, the assumptions for use of Pearson's product moment correlation require a continuous or dichotomous level of measurement for variables used in analysis (Pallant, 2007). Class standing was an ordinal level variable. Therefore, Spearman's rank order correlational analysis was used for all pairs. Correlational analysis was used to assist in examining the direction and magnitude of the associations between variables. Results of the correlational analysis can be seen in Table 3.

According to Cohen (1992), a correlation coefficient with an absolute value between .10 and .29 denotes a small effect between two variables, a correlation coefficient between .30 and .49 indicates a moderate effect, and a correlation coefficient between .50 and 1.0 indicates a strong effect. Results of the correlational analysis indicated significant, positive correlations between five variable pairs: (a) FMO participation and Organizational Leadership ( $\rho = .151, p = .008$ ), (b) FMO participation and Community Leadership ( $\rho = .151, p = .010$ ), (c) Individual Leadership and Organizational Leadership ( $\rho = .804, p < .0005$ ), (d) Individual Leadership and Community Leadership ( $\rho = .668, p < .0005$ ), and (e) Organizational Leadership and Community Leadership ( $\rho = .702, p < .0005$ ). The positive correlation between these pairs implied that the values of the variable pairs move in a like manner (when one variable increases in value the other variable also increases in value and when one variable decreases in value the other value also decreases in value).

Table 3

*Correlation Coefficients of the Variables used in Hypothesis Testing*

Variable	1	2	3	4	5
1. FMO participation					
2. Gender	.014				
3. Class standing	.036	-.011			
4. Individual Leadership	.099	.024	.034		
5. Organizational Leadership	.151**	.056	.038	.804**	
6. Community Leadership	.151**	-.022	-.093	.668**	.702**

\*  $p < .05$  (2-sided test); \*\*  $p < .01$  (2-sided test)

### Sign Test

A sign test was used to address the first research question of this study. A sign test is used to compare dichotomous data to a binomial distribution as a means of assessing the probability of obtaining the collected sample as compared to an expected rate of success. The sign test was performed using a single dichotomous variable (FMO participation, coded 0 = “No” and 1 = “Yes”). The expected rate of success was set to .50 (equal number of student bandleaders in an FMO and not in an FMO). Approximately sixty-nine percent of the students were members of an FMO, which when compared to the .50 test proportion, was statistically significant ( $p < .0005$ ). The results indicated that the proportion of student bandleaders who are part of an FMO differed from 50%.

### Hierarchical Linear Models

A total of three hierarchical linear models were used to address the second and third research questions of this study. Each of the three models contained the same structure (two levels with student bandleaders nested inside of schools) and independent variables (FMO participation, gender, and class standing), but differed in the choice of dependent variable (Individual Leadership, Organizational Leadership, or Community Leadership).

In order to test the appropriateness of using the HLM structure, null models (containing no predictors) were created for all three dependent variables (Individual Leadership, Organizational Leadership, and Community Leadership). The null models had three parameters each: (a) one parameter for the grand mean of the associated dependent variable score (Individual Leadership:  $M = 43.94$ ,  $SEM = .76$ ; Organizational Leadership:  $M = 38.43$ ,  $SEM = .76$ ; and Community Leadership:  $M = 20.46$ ,  $SEM = .50$ ), (b) one parameter for the variability in school intercepts, and (c) one parameter for the residual (error) variance. Intraclass correlation coefficients (ICC) were computed for each model to determine the amount of variability between schools at the second level. The following intraclass correlation (ICC) values were obtained from the three HLMs used in this study: (a)  $ICC = .099$  for the model with the dependent variable of

Individual Leadership; (b) ICC = .129 for the model with the dependent variable of Organizational Leadership; and (c) ICC = .091 for the model with the dependent variable of Community Leadership. These ICC values indicated that 9.9%, 12.9%, and 9.1% of the variance lies within the second level of the models using dependent variables Individual Leadership, Organizational Leadership, and Community Leadership, respectively. Given this existent variation on the second level of all three models, the use of an HLM was deemed appropriate for all three models.

Bickel (2007) states that centering should always be performed when fitting a multilevel regression model since it improves the estimates of coefficients. Therefore, prior to construction of the full models, all independent variables were centered. Dichotomous independent variables (FMO participation and gender) were effect coded (given codes of -1 and 1), while the ordinal independent variable (class standing) was median centered (Norman & Streiner, 2008).

All three hierarchical linear models contained three predictors (FMO participation, gender, and class standing), as well as the three effects included in the respective null models described above (for a total of six parameters). The full models were significantly better than the null models (containing no parameters): (a) for the model containing Individual Leadership as the dependent variable,  $\chi^2(3) = 2430.16 - 2350.38 = 79.78, p < .005$ ; (b) for the model containing Organizational Leadership as the dependent variable,  $\chi^2(3) = 2206.27 - 2122.52 = 83.75, p < .005$ ; and (c) for the model containing Community Leadership as the dependent variable,  $\chi^2(3) = 1904.35 - 1849.33 = 55.02, p < .005$ . These significant differences indicated that including the predictors improved each of the three models beyond the respective null models which only included the variability between student bandleaders and schools.

#### Full Model Using Individual Leadership as the Dependent Variable

The full model containing the dependent variable of Individual Leadership was used to address Hypotheses 2a and 3a. Table 4 presents the results obtained from the full two-level HLM model with Individual Leadership as the dependent variable. Significance was found for the

random intercepts at the school level ( $p = .042$ ) indicating that the Individual Leadership score varied between schools. The residual term was also significant ( $p < .0005$ ), indicating that the model could potentially be improved by use of additional or different predictors. FMO participation was positively associated with Individual Leadership,  $B = 1.64$ ,  $t(315) = 2.74$ ,  $p = .006$ . The direction and magnitude of the coefficient indicated that student bandleaders who were FMO members scored an average of 3.28 points higher in Individual Leadership than student bandleaders not participating in an FMO. Additionally, a significant level-1 fixed intercept was found within the model,  $B = 43.25$ ,  $t(36) = 52.42$ ,  $p < .0005$ . This established a score of 43.25 as the best estimate of the Individual Leadership score across both groups of FMO participation and gender when class standing was set equal to the median of class standing.



Table 4

*Results of Two-Level Model of Individual Leadership*

Random effect at Level 2 (School Differences)						
Effect	B	SE B	Wald Z	P	95% CI	
					Lower	Upper
Intercepts	10.84	5.34	2.03	.042	4.13	28.46
Variance						
Random effect at Level 1 (Student Bandleaders)						
Effect	B	SE B	Wald Z	P	95% CI	
					Lower	Upper
Residual	85.83	7.21	11.91	<.0005	72.81	101.19
Fixed Effects (Averaged over Schools and Students)						
Effect	B	SE B	t(approx. df)	P	95% CI	
					Lower	Upper

Intercept	43.25	0.83	52.42 (36)	<.0005	41.58	44.93
FMO participation	1.64	0.60	2.74 (314)	.006	0.46	2.82
Gender	-0.02	0.53	-0.04 (307)	.972	-1.07	1.03
Class standing	-0.22	0.64	-0.35 (294)	.729	-1.48	1.03

*Note.* *B* = Parameter Estimate; *SE B* = Standard Error of the Parameter Estimate; *CI* = Confidence Interval.

FMO participation is effect coded with “No FMO membership”= -1 and “FMO membership”= 1;

Gender is effect coded with Male = -1 and Female = 1;

Class standing is median centered.

### Full Model Using Organizational Leadership as the Dependent Variable

The full model containing the dependent variable of Organizational Leadership was used to address Hypotheses 2b and 3b. Table 5 presents the results obtained from the full two-level HLM model with Organizational Leadership as the dependent variable. Significance was found for the random intercepts at the school level ( $p = .035$ ) indicating that the Organizational Leadership score varied between schools. The residual term was also significant ( $p < .0005$ ), indicating that the model could potentially be improved by use of additional or different predictors. FMO participation was positively associated with Organizational Leadership,  $B = 1.79$ ,  $t(293) = 3.19$ ,  $p = .002$ . The direction and magnitude of the coefficient indicated that student bandleaders who were FMO members scored an average of 3.58 points higher in Organizational Leadership than student bandleaders not participating in an FMO. Additionally, a significant level-1 fixed intercept was found within the model,  $B = 37.74$ ,  $t(34) = 47.04$ ,  $p < .0005$ . This established a score of 37.74 as the best estimate of the Individual Leadership score across both groups of FMO participation and gender when class standing was set equal to the median of class standing.

Table 5

*Results of Two-Level Model of Organizational Leadership*

Random effect at Level 2 (School Differences)						
Effect	B	SE B	Wald Z	P	95% CI	
					Lower	Upper
Intercepts						
Variance	11.08	5.24	2.11	.035	4.38	28.01
Random effect at Level 1 (Student Bandleaders)						
Effect	B	SE B	Wald Z	P	95% CI	
					Lower	Upper
Residual	69.37	6.09	11.38	<.0005	58.39	82.40

---

Fixed Effects (Averaged over Schools and Students)

Effect	B	SE B	T (approx. df)	P	95% CI	
					Lower	Upper
Intercepts	37.74	0.80	47.04 (34)	<.0005	36.11	39.37
FMO participation	1.79	0.56	3.19 (293)	.002	0.69	2.90
Gender	0.50	0.50	0.99 (286)	.325	-0.49	1.49
Class standing	0.05	0.60	0.09 (277)	.931	-1.13	1.24

---

*Note.* B = Parameter Estimate; SE B = Standard Error of the Parameter Estimate; CI = Confidence Interval.

FMO participation is effect coded with “No FMO membership”= -1 and “FMO membership”= 1;

Gender is effect coded with Male = -1 and Female = 1;

Class standing is median centered.

### Full Model Using Community Leadership as the Dependent Variable

The full model containing the dependent variable of Community Leadership was used to address Hypotheses 2c and 3c. Table 6 presents the results obtained from the full two-level HLM model with Community Leadership as the dependent variable. Significance was not found for the random intercepts at the school level ( $p = .114$ ), which indicated that there was not sufficient evidence to show that variation existed in Community Leadership score between schools. The residual term was found to be significant ( $p < .0005$ ), indicating that the model could potentially be improved by use of additional or different predictors. FMO participation was positively associated with Community Leadership,  $B = 1.26$ ,  $t(276) = 3.13$ ,  $p = .002$ . The direction and magnitude of the coefficient indicated that student bandleaders who were FMO members scored an average of 2.52 points higher in Community Leadership than student bandleaders not participating in an FMO. Additionally, a significant level-1 fixed intercept was found within the model,  $B = 20.06$ ,  $t(31) = 39.00$ ,  $p < .0005$ . This established a score of 20.06 as the best estimate of the Community Leadership score across both groups of FMO participation and gender when class standing was set equal to the median of class standing.

Table 6

*Results of Two-Level Model of Community Leadership*

Random effect at Level 2 (School Differences)						
Effect	B	SE B	Wald Z	p	95% CI	
					Lower	Upper
Intercepts						
Variance	3.39	2.15	1.58	.114	0.98	11.74
Random effect at Level 1 (Student Bandleaders)						
Effect	B	SE B	Wald Z	p	95% CI	
					Lower	Upper
Residual	35.80	3.21	11.14	<.0005	30.03	42.68

---

Fixed Effects (Averaged over Schools and Students)

Effect	B	SE B	t(approx. df)	p	95% CI	
					Lower	Upper
Intercepts	20.06	0.51	39.00 (31)	<.0005	19.01	21.11
FMO participation	1.26	0.40	3.13 (276)	.002	0.47	2.06
Gender	-0.25	0.36	-0.70 (275)	.487	-0.97	0.46
Class standing	-0.77	0.43	-1.80 (238)	.073	-1.62	0.07

---

*Note.* B = Parameter Estimate; SE B = Standard Error of the Parameter Estimate; CI = Confidence Interval.

FMO participation is effect coded with “No FMO membership”= -1 and “FMO membership”= 1;

Gender is effect coded with Male = -1 and Female = 1;

Class standing is median centered.



### Questions and Hypotheses

Results of the sign test were used to address Research Question 1, while the model specifications for the three HLMs from Tables 4 – 6 were used to address Research Questions 2 and 3. Each of the three research questions and corresponding hypotheses is addressed separately below.

Research Question 1 (RQ1): Does the proportion of student bandleaders who are part of an FMO differ from 50%?

Null Hypothesis 1 (H01): Proportion of FMO student bandleaders does not show a statistically significant difference from 50%.

Alternative Hypothesis 1 (HA1): Proportion of FMO student bandleaders shows a statistically significant difference from 50%.

#### Conclusion related to Research Question 1

Significant results ( $p < .0005$ ) were found for the sign test, which assesses the goodness of fit for an observed proportion (69%) when compared to an expected proportion of equal membership between FMO groups (50%). Therefore, reject Null Hypothesis 1. There is sufficient evidence to support Alternative Hypothesis 1 that the proportion of FMO student bandleaders shows a statistically significant difference from 50%.

Research Question 2 (RQ2): What is the association between leadership qualities and FMO participation while controlling for student attributes (gender and class standing)?

Null Hypothesis 2a (H02a): There is not a statistically significant relationship between individual leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2a (HA2a): There is a statistically significant relationship between individual leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

### Conclusion related to Hypothesis 2a.

A significant positive relationship was found between FMO participation and Individual Leadership scores,  $B = 1.64$ ,  $t(315) = 2.74$ ,  $p = .006$ . Therefore, Null Hypothesis 2a was rejected. There is sufficient evidence to indicate that there is a statistically significant (positive) relationship between individual leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Null Hypothesis 2b (H02b): There is not a statistically significant relationship between organizational leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2b (HA2b): There is a statistically significant relationship between organizational leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

### Conclusion related to Hypothesis 2b

A significant positive relationship was found between FMO participation and Organizational Leadership scores,  $B = 1.79$ ,  $t(293) = 3.19$ ,  $p = .002$ . Therefore, Null Hypothesis 2b was rejected. There is sufficient evidence to indicate that there is a statistically significant (positive) relationship between organizational leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Null Hypothesis 2c (H02c): There is not a statistically significant relationship between college leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Alternative Hypothesis 2c (HA2c): There is a statistically significant relationship between college leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

### Conclusion related to Hypothesis 2c

A significant positive relationship was found between FMO participation and Community Leadership scores,  $B = 1.26$ ,  $t(276) = 3.13$ ,  $p = .002$ . Therefore, Null Hypothesis 2c was rejected. There is sufficient evidence to indicate that there is a statistically significant (positive) relationship between college leadership qualities and FMO participation while controlling for student attributes (gender and class standing).

Research Question 3 (RQ3): With students nested in colleges, is there a difference in leadership qualities between colleges?

Null Hypothesis 3a (H03a): There is not a statistically significant difference in the variance between intercepts (mean scores) of student individual leadership quality levels between colleges.

Alternative Hypothesis 3a (HA3a): There is a statistically significant difference in the variance between intercepts (mean scores) of student individual leadership quality levels between colleges.

### Conclusion related to Hypothesis 3a

A significant random effect, level-2 intercept was found,  $B = 10.84$ , Wald  $Z = 2.03$ ,  $p = .042$ . Therefore, Null Hypothesis 3a was rejected. There is sufficient evidence to indicate that there is a statistically significant difference in the variance between intercepts (mean scores) of student individual leadership quality levels between colleges.

Null Hypothesis 3b (H03b): There is not a statistically significant difference in the variance between intercepts (mean scores) of student organizational leadership quality levels between colleges.

Alternative Hypothesis 3b (HA3b): There is a statistically significant difference in the variance between intercepts (mean scores) of student organizational leadership quality levels between colleges.

### Conclusion related to Hypothesis 3b

A significant random effect, level-2 intercept was found,  $B = 11.08$ , Wald  $Z = 2.11$ ,  $p = .035$ . Therefore, Null Hypothesis 3b was rejected. There is sufficient evidence to indicate that there is a statistically significant difference in the variance between intercepts (mean scores) of student organizational leadership quality levels between colleges.

Null Hypothesis 3c (H03c): There is not a statistically significant difference in the variance between intercepts (mean scores) of student college leadership quality levels between colleges.

Alternative Hypothesis 3c (HA3c): There is a statistically significant difference in the variance between intercepts (mean scores) of student college leadership quality levels between colleges.

### Conclusion related to Hypothesis 3c

A significant random effect, level-2 intercept was not found,  $B = 3.39$ , Wald  $Z = 1.58$ ,  $p = .114$ . Therefore, Null Hypothesis 3c was not rejected. There is not sufficient evidence to indicate that there is a statistically significant difference in the variance between intercepts (mean scores) of student college leadership quality levels between colleges.

### Summary

Chapter 4 began with an overview of the purpose, research questions, and hypotheses of the study. A discussion of the missing data and corrective actions to accommodate analysis when using records with missing data was presented. Descriptive statistics were presented to describe the retained sample ( $N = 340$ ) of this study. Assumption and reliability checks were performed to ensure the collected data provided consistent and reliable measures of leadership qualities.

After the assumptions were checked, hypothesis testing was performed using a sign test to address Research Question 1, while three HLMs were used to address Research Questions 2 and 3. The sign test was performed using proportions obtained from FMO participation. Significance within the sign test indicated that the proportion of student bandleaders who are

members of an FMO was significantly greater than 50%. Significant results found for the association between FMO participation and each of the three measured leadership types (Individual Leadership, Organizational Leadership, and Community Leadership) provided sufficient evidence to indicate the existence of these (positive) relationships. Additionally, significant results found for the random effect school level intercepts in the models containing dependent variables of Individual Leadership and Organizational Leadership provided sufficient evidence to indicate that there was a statistically significant difference in the variance between intercepts (mean scores) of both Individual Leadership and Organizational Leadership levels between colleges. Alternatively, non-significant findings were noted for the random effect school level intercepts in the models containing the dependent variable of Community Leadership. Thus there was insufficient evidence to reject Null Hypothesis 3.

## CHAPTER 5

### SUMMARY AND CONCLUSIONS

This chapter analyzes and summarizes the findings, as well as the implications of the study. Recommendations for future research are also presented.

The purpose of this study was to investigate the influences and outcomes of fraternal music organizations on student leadership in college and university band programs; as well as examine the relationship between student traits (gender, class standing, and FMO participation) and leadership level as measured by Black's Leadership Measurement Instrument (BLMI) at three levels (individual, organizational, and community). The sample was taken from student bandleaders nested in colleges and university band programs across the United States that housed at least two of the six FMOs (Kappa Kappa Psi, Tau Beta Sigma, Phi Mu Alpha, Sigma Alpha Iota, Mu Phi Epsilon, Delta Omicron).

While research suggests that FMOs have a statistically significant (positive) impact on the levels of individual and organizational student leadership in college band programs, there is not enough evidence to support a statistically significant relationship between FMOs and student leadership on the community level, except in the area of cultural awareness.

#### Summary and Interpretation of Findings

Data were gathered using a survey instrument consisting of 31 items developed using an adapted model of Black's Leadership Measurement Instrument (BLMI; Black, 2006). The BLMI was utilized to examine the relationship between experience in a fraternal music organization (FMO) and leadership levels of the participants in an FMO. The 31 items, used as dependent variables in hypothesis testing, were divided into three "levels" as follows: (a) Individual Leadership, made up of the 12 Level-1 items from the BLMI; (b) Organizational Leadership

made up of the 11 level-2 items from the BLMI; and (c) Community Leadership, made up of the 8 level-3 items from the BLMI. Individual items were scored on a 5-point Likert scale ranging from 1 = none/not at all to 5 = a great deal. The individual items of each level were summed to derive a total score. Higher total scores were indicative of increased leadership qualities due to FMO participation.

A target population of  $N = 390$  students was required for the HLM analysis. Although this targeted population was reached, many of the surveys were incomplete in some areas. Although multiple score usage options were considered by the researcher, it was decided that summed scores should be used in order to preserve the integrity of the BLMI. This resulted in a total sample size for analysis of 340 undergraduate students who held student leadership positions in a band ensemble, nested within 41 colleges or universities housing at least two of the following six FMOs: (a) Kappa Kappa Psi, (b) Tau Beta Sigma, (c) Phi Mu Alpha, (d) Sigma Alpha Iota, (e) Mu Phi Epsilon, (f) Delta Omicron.

Individual level outcomes indicated that student bandleaders were most affected at the individual level. This finding is not surprising. Black (2006) indicates in her study that the individual domain is the space in which one sees the most direct growth in a leadership program.

Student participants were asked to respond to twelve items assessing how they, as individuals, had changed because of their band leadership experience. This section of the instrument was adapted to measure twelve variables: self-confidence, creative thinking, business skills, changed by their bandleader experience, meet people, value of their time, value of family, school ensemble involvement, growth as an individual, control, life changing events, and the power to make a difference.

Participants indicated two of the 12 items as affecting “a great deal” of change: value of family ( $f = 103$ ;  $\% = 30.3$ ); series of life changing events ( $f = 94$ ;  $\% = 27.6$ ). Nine scales reflected a “much” level of program outcomes among student leader respondents: school ensemble involvement ( $f = 115$ ;  $\% = 33.8$ ); improvement in self-confidence ( $f = 127$ ;  $\% = 37.4$ ); improved

creative thinking (f = 133; % = 39.1); business skills (f = 106; % = 31.2); meet people to imitate success (f = 124; % = 36.5%); value of time (f = 136; % = 40); growth (f = 143; % = 42.1); control (f = 94; % = 27.6); power to make a difference (f = 135; % = 39.7). The remaining one item scored at the “some” level: changed by my bandleader experience (f = 103; % = 30.3). No items scored at the “a little” or “none” levels.

The organizational domain of the bandleader survey instrument was adapted to measure the participants’ outcomes on a sub-scale comprised of eleven variables. These were: organizational decision making skills, networking skills, responding to problems and situations more effectively, innovative approach to problem-solving, more efficient use of time, facilitating change, involvement in professional organizations, use of resources, change in direction of career, compete on different level in career, and building a better network of contacts.

Out of the eleven items, none indicated “a great deal”. Ten of the items scored a “much” level of outcome: organizational decision making skills (f = 118; % = 34.7); improved networking skills (f = 115; % = 33.8); response to problems and situations (f = 136; % = 40); innovative approach to problem-solving (f = 121; % = 35.6); more efficient use of time (f = 122; % = 35.9); facilitating change (f = 121; % = 35.6); involvement in professional organizations (f = 81; % = 23.8); efficient use of resources (f = 129; % = 37.9); compete on different level in career (f = 87; % = 25.6); build a better network of contacts (f = 98; % = 28.8). The remaining item scored at the “none/not at all” rank: change the direction of my career (f = 148; % = 43.5). There were no items that indicated “some” or “a little.”

The results of this data are not surprising. While students in FMOs scored higher points in Organizational Leadership than students not participating in FMOs, there seems to be no effect on the influences of career selections in student participants. The fraternal music organizations, as an example, had shown founding members with a variety of career paths. According to the Kappa Kappa Psi historical archives, all ten of the founding members were associated with the college



band program, but none of them pursued a degree in music. This is one example which seems to reflect the data of the study.

The community domain refers to neighborhoods, communities, or sectors of musical participation outside of the colleges and universities to which the influences of participants may extend. The community level items were designed to measure how participation in the community changed after the student bandleader experience. This section consisted of eight subscales intended to measure the following: involvement in local music ensembles, involvement in music ensembles on a state level, involvement in music ensembles on a national level, involvement with music ensembles in other countries, awareness of value of time, involvement with community organizations, reducing commitment in some organizations to be more effective in other organizations, and appreciation of cultural differences.

Of the eight items, none indicated “a great deal” or “a little.” Four of the items scored “none/not at all” level of outcome among student bandleaders: involvement in local music ensembles ( $f = 83$ ;  $\% = 24.4$ ); involvement in ensembles on a state level ( $f = 163$ ;  $\% = 47.9$ ); involvement with ensembles on a national level ( $f = 210$ ;  $\% = 61.8$ ); involvement with ensembles in other countries ( $f = 252$ ;  $\% = 74.1$ ). Three of the remaining items scored “some” among respondents: increased involvement with community organizations ( $f = 91$ ;  $\% = 26.8$ ); reduced commitment to some organizations to be more effective in other organizations ( $f = 89$ ;  $\% = 26.2$ ); appreciation of cultural differences ( $f = 80$ ;  $\% = 23.5$ ). The remaining item scored “much” from student bandleaders: awareness of value of time ( $f = 98$ ;  $\% = 28.8$ ). While much of the literature places Greek fraternities and sororities in a negative connotation (Eberhart, Rice, Smith, 2003; Park, Sher & Krill, 2009; Wechsler, 1996), the results of this study support the opinion of scholars such as Kimborough & Hutcheson (1998) who assert that Greek fraternities and sororities, specifically fraternal music organizations, are important vehicles of student leadership. The data are also in agreement with Harms, Woods, Roberts, Bureau, & Green (2006) and Kelly (2008) who put forth the notion that Greek-letter organizations tout leadership development as a

hallmark. Scholars such as Dollar (1966) and Astin (1977) are supported when stating that “Greeks” tend to exhibit more developed leadership skills. The Center for Learning Outcomes and Assessment (2009) is also positively supported by the research when stating that achievement of learning outcomes are positively impacted by fraternity and sorority affiliation.

Concerning the effects of FMO participation in student bandleaders, Dunnigan (1998) suggests that student leaders should be selected for good character and have a sense of responsibility. Despite the lack of statistical correlation on the individual level, it may be implied that student leaders in FMOs tend to improve and grow significantly from their bandleader experience. Lautzenheiser (2005) states that any successful ensemble is made up of a strong director and a committed group of responsible and dedicated student leaders. Taylor (2008) states that effective leadership can be the positive or negative determining factor in the morale of a band program. The results show that individual relationship to the bandleader experience has the most dramatic results. With respect to FMO participation, the vast majority of student bandleaders in this study belong to a fraternal music organization. According to the results of this study, student bandleaders who were FMO members scored an average of 3.28 points higher in Individual Leadership than student bandleaders not participating in an FMO. In addition, a significant positive relationship was found between FMO participation and Organizational Leadership scores. The data indicated that student bandleaders who were FMO members scored an average of 3.58 points higher in Organizational Leadership than student bandleaders not participating in an FMO. FMO participation was positively associated with Community Leadership. Results indicated that student bandleaders who were FMO members scored an average of 2.52 points higher in Community Leadership than student bandleaders not participating in FMOs.

#### Research Question Analysis

Research Question One: Does the proportion of student bandleaders who are part of an FMO differ from 50%?

The proportion of FMO student bandleaders shows a statistically greater difference from 50%. Significant results found for the association between FMO participation and each of the three measured leadership types provided sufficient evidence to indicate the existence of positive relationships. The researcher used 50% as an indicator to test the possibility of chance. When statistically testing a “yes-or-no” scenario (i.e., FMO participant or non-FMO participant), the probability of chance can be a factor. Based on the results of this study, more than two-thirds ( $f = 234$ ;  $\% = 68.8$ ) of the student bandleaders at colleges and universities from this national sample are affiliated with an FMO. These findings suggest that student bandleaders could be consciously making the choice to participate in FMOs, rather than the relationship of their band leadership and FMO participation being a mere coincidence. The remaining one-third of the students (30.8%) did not participate in an FMO, while 0.9% of participants did not answer the question. Although the literature concerning FMO leadership and college bands is very scarce, Stein (2008) states that student bandleaders are an absolute necessity in order to achieve success. Based on the results of the data, one might infer that many college directors hold student associated with FMOs in a positive regard when selecting student leaders for the success of their respective programs.

Research Question Two: What is the association between leadership qualities and FMO participation while controlling for the student attributes of gender and class standing?

Regarding the results of the variables of gender and class standing, it can be assumed that the majority of student leadership in college band programs consists of junior and senior members. These two class standings represent 75% of the data. While the correlations for class standing is not significant (.036), it may be inferred that most college band directors value a higher class standing when selecting leadership. The outcomes of this research correspond with the literature. Band student leadership literature (Criss, 2010) indicates that student leaders in band are important for providing role models for younger players. According to the results, three-fourths of the leadership in the sample are comprised of junior and senior level students ( $f = 255$ ;  $\% = 75$ ). With regard to gender, there was not a significant gap in results (.014). However, more

than 50% of the sample population consisted of female students (52.7%). This result, though interesting due the longstanding history of gender exclusion in the college band program (Beier, 1983; Knedler, 1994; McCarrell, 1971), did not provide sufficient evidence to indicate that there is a statistically significant relationship between student leadership qualities and FMO participation while controlling for student attributes such as gender and class standing.

Research Question Three: With students nested in colleges, is there a difference in leadership qualities between colleges?

Results of this study were obtained from the full two-level HLM model with each of the three levels of leadership as the dependent variable. Significance for the individual level was found at the school level ( $p = .042$ ) indicating that the Individual Leadership score varied between schools. The study also showed significance and variance between schools for Organizational Leadership ( $p = .035$ ). In the case of Community Leadership, however, there was not sufficient evidence to show that variation existed between schools ( $p = .114$ ). Although there are statistically significant and positive correlations of student leadership on the individual and organizational levels, there was not enough evidence to support that variation existed in student leadership scores between schools on the community level.

### Implications

The results of this research summarily point to the many positive influences, developmental opportunities, and challenges for student bandleaders participating in fraternal music organizations. The culture of the college band program dictates that the success of the program hinges on the synchronicity of the director and the student leadership selected. Since FMOs were formed and operate with the goal of providing structure, traditions, values, and purposes to their members, one can imply that the teachings garnered by participation in an FMO serve in a positive capacity to nurture student leadership in college band programs.

Although there is not much literature concerning fraternal music organizations and their impact on student leadership, the existing literature concerning the function of fraternities and

sororities is painted as a picturesque debate between positive and negative connotations. The findings of this study, however, suggest that the experience of today's FMOs, and the student leaders they produce, is drastically different than the discourse of fraternities and sororities portrayed in the media. The study suggests that the fraternal music organizations examined seem to be beneficial and effective in developing student leadership in college bands, and can be assumed to garner a mostly positive relationship among college band directors.

#### Discussion on Limitations

Many of the limitations stemmed from the data collection process for this study. Emails were sent to a population of 152. These schools, at the time of consideration, met the criteria for research by housing two of the six FMOs. Participants at these respective institutions were selected based on availability and willingness to participate in the study (Gravetter & Forzano, 2012). The primary limitation came from a lack of completed student surveys. Due to structure of the power analysis, 390 student responses were needed to power the study. While 390 responses were gathered, many of the returned surveys were incomplete. This resulted in many of the surveys not being able to contribute to the study.

Another limitation occurred during the data collection process. Eight of the 152 schools were in the process of searching for, or hiring, a band director. Since the director of the program is the key element for distributing the survey to student leaders, gathering data from these institutions proved somewhat difficult.

Finally, the survey link was sent to the emails of the directors. This also created a small problem as some emails blocked or classified the link as junk or spam. This resulted in many directors not receiving the survey link to distribute to their bandleaders.

#### Suggestions for Future Research

It is recommended that the adaptation of Black's Leadership Measurement Instrument (BLMI) be further studied. The BLMI can effectively measure the outcomes of leadership programs on three domains with a high reliability. The purpose of this study was to determine the

outcomes of fraternal music organization participation on student leaders in college band programs. Although progress has been made toward understanding leadership program outcomes in Greek organizations nested in academia, much more needs to be made. Suggestions are as follows:

- 1) Utilize this research on alumni from college band programs. Since the majority of student leaders are junior and senior level, it stands to reason that much of their leadership ability will be exerted after graduation. The BLMI can be applied to assist in program evaluation for the respective FMOs.
- 2) Explore FMO participation on student leadership based on specific institutions in order to ascertain which college programs develop the most effective student leaders.
- 3) Expand this research to stakeholders (i.e., directors, national organizations) to determine their expectations for student leadership and detect levels of change. It would be useful to conduct a focus group of the directors of the college band programs to identify their priorities and changes in behavior, relationships, activities, or actions that the FMO development programs are expected to bring about.
- 4) Based upon the research findings reported in this study, determine if changes to the leadership development programs of fraternal music organizations need to be made. For example, questions could be added to measure the level of learning of the student respondents.
- 5) Determine which other variables could be tested in order to improve the frequency and significance of predictors as it relates to student band leadership (i.e., race, grade-point average, socioeconomic status, etc.).

## REFERENCES

- Anson, J.L., & Marchesani, R.F. Jr., eds. (1991). *Baird's Manual of American College Fraternities*, 20th edition. Indianapolis, IN: Baird's Manual Foundation.
- Asel, A.M., Seifert, T.A., & Pascarella, E.T. (2009). Effects of Greek affiliation on college experiences and outcomes: A portrait of complexity. *Oracle: The Research Journal of the Association of Fraternity Advisors*, 4(2), 1-15.
- Astin, A.W. (1977). *Four Critical Years: Effects of College on Beliefs, Attitudes, and Knowledge*. San Francisco: Jossey-Bass, 1977.
- Astin, A.W. (1985). *Achieving educational excellence*. San Francisco: Jossey-Bass.
- Astin, A.W. (1993). *What matters in college? Four critical years revisited*. San Francisco: Jossey-Bass. 227
- Baird, W. R. *Baird's manual of American college fraternities*. (1997).
- Barge, J. K. (1994). *Leadership : Communication skills for organizations and groups*. New York: St. Martin's Press.
- Beier, D. H. (1983). *Bands at the University of Colorado: An historical review, 1908-1978*. Unpublished doctoral dissertation, University of Colorado, Boulder.
- Bickel, R. (2007). *Multilevel Analysis for Applied Research*. New York, NY: The Guilford Press.
- Black, A. M. (2006, October). *Leadership Program Outcomes Measure—LPOM*. Paper presented at ILA Conference, Chicago, IL.
- Black, A. (2006). Summary and Conclusions. In *Evaluating the Effectiveness of an Ohio Statewide Agricultural Leadership Program*. Columbus: The Ohio State University.
- Blackburn, S.S. & Janosik, S.M. (2009). *Learning communities in fraternity/sorority housing*. *Oracle: The Research Journal of the Association of Fraternity Advisors*, 4(2), 56-70.
- Bok, D. *Quality of Teaching: The President's Report*. Cambridge, Mass.: Harvard University Press, 1986.
- Bowen, H.R. *Investment in Learning: The Individual and Social Value of American Higher Education*. San Francisco: Jossey-Bass, 1977.
- Buyer, P. (2009). Studying Leadership Styles. *Marching Bands and Drumlines* (). Galesville: Meredith Music.
- Carmines, E., & Stimson, J. (1989). *Issue evolution: Race and the transformation of American politics*. Princeton, N.J.: Princeton University Press.
- Center for Learning Outcomes Assessment. (2009). *The University Learning Outcomes Assessment (UniLOA) National Report of Means*. Retrieved from <http://nicindy.org/fraternityrights/about/>

- Childs, R. E. (1993, August). Black Greek fraternities in the '90s: Are they still culturally relevant? *Ebony Man*, pp.44, 51.
- Cohen, J. (1992). A Power Primer, *Psychological Bulletin*: 112 :( 1), 155-159.
- Cooper and Schindler, 2005 R. Cooper and S. Schindler, *Business Research Methods* (9<sup>th</sup> ed.), McGraw-Hill, Boston, MA.
- Cory, A. J. (2011). *The influence of fraternity or sorority membership on the leadership identity development of college student leaders*.
- Creswell, J. W. (2009). *Research design : qualitative, quantitative, and mixed methods approaches*. 3rd ed. Thousand Oaks, Calif.: Sage Publications.
- Criss, E. (2010). Teamwork in the music room. *Music Educators Journal*, 97(1), 30-36.
- Dollar, R.J. "Student Characteristics and Choice of Housing." *Journal of College Student Personnel*, 1960, 1, 19-22.
- Drout, C., & Corsoro, C. (2003). Attitudes toward fraternity hazing among fraternity members, sorority members, and non-Greek students. *Social Behavior and Personality: An International Journal*, 31(6), 535-543.
- Dunnigan, P. (1998). Organization and Administration. *Marching Band Techniques: Designing, Rehearsing, and Perfecting Marching Band Shows with School Ensembles* (6-7). Northfield: Instrumentalist Publishing.
- Duvall, W. (1960). *The high school band director's handbook*. Englewood Cliffs, N.J.: Prentice-Hall.
- Eberhart, D., Rice, N.D., & Smith, L.D. (2003). Effects of Greek membership on academic integrity, alcohol abuse, and risky sexual behavior at a small college. *The NASPA Journal*, 41(1), 137-148.
- Edgerton, R. "Closing Convictions." *American Association of Higher Education Bulletin*, 1986, 39, 7-12.
- Field, A. (2005). *Discovering Statistics Using SPSS* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage Publications.
- Gliem, J. A. & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's Alpha reliability coefficient for Likert-Type scales. 2003 Midwest Research to Practice Conference in Adult, Continuing and Community Education, p. 82-88.
- Golemo, Michael (Spring 2005). "Kappa Kappa Psi and John Philip Sousa". *PODIUM* (Stillwater, OK: Kappa Kappa Psi/Tau Beta Sigma): 28-9.
- Gravetter, F. J., & Forzano, L. B. (2012). *Research Methods for the Behavioral Sciences* (4th ed.). Toronto: Wadsworth.



- Gregory, D.E. & associates (2003). *The administration of fraternal organizations on North American campuses: a pattern for the new millennium*. Asheville, NC: College Administration Publications.
- Grove, J. T., Kibel, B. M., & Haas, T. (2005). *EvaluLEAD: A guide for shaping and evaluating leadership development programs*. Oakland, CA: Sustainable Leadership Initiative, Public Health Institute.
- Grove, J., & PLP Team. (2002, March). *The EvaluLEAD Framework. Examining success and meaning: A framework for evaluating leadership development interventions in global health* [Position paper]. Retrieved February 10, 2004, from <http://www.popldr.org/fellows/docsEvaluLEADPositionPaper.pdf>
- Harms, P.D., Woods, D., Roberts, B., Bureau, D. & Green, A. (2006). Perceptions of leadership in undergraduate fraternal organizations. *Oracle: The Research Journal of the Association of Fraternity Advisors*, 3(2), 1-10.
- Hayek, J.C., Carini, R.M., O'Day, P.T., & Kuh, G.D. (2002). Triumph or tragedy: comparing student engagement levels of members of Greek organizations and other students. *Journal of College Student Development*, 43(5), 643-663.
- History and Information. (n.d.). Delta Omicron International Music Fraternity. Retrieved June 30, 2014, from <http://www.delta-omicron.org/?q=node/66>
- Horowitz, H.L. (1987). *Campus life*. New York: Alfred A. Knopf
- Isenberg, Gilbert (1922). "History of Kappa Kappa Psi, National Band Fraternity". BATON (Stillwater, OK: Kappa Kappa Psi) 1 (1): 8-9.
- Jones, A. (1938). *The education of youth for leadership*, New York: McGraw-Hill Book.
- Kelly, D. R. (2008). Leadership development through the fraternity experience and the relationship to career success after graduation. *Oracle: The Research Journal of the Association of Fraternity Advisors*, 3(1), 1-12.
- Kimborough, W., & Hutcheson, P. (1998). The Impact of Black Greek Letter Organizations on Black Students' Involvement in Collegiate Activities and Their Development of Leadership Skills. *The Journal of Negro Education*, 67(2), 96-105.
- Knedler, J. M. (1994). A history of the University of Oklahoma Band to 1971. Unpublished doctoral dissertation, Ph.D., The University of Oklahoma, Norman.
- Komives, S.R., & Woodard, D. Jr. (Eds.). (2003). *Student services: A handbook for the profession* (4th ed.). San Francisco: Jossey-Bass.
- Lautzenheiser, T. (c2005). *Music advocacy and student leadership : Key components of every successful music program : A collection of writings*. Chicago: GIA Publications Inc.
- Lee, J. (1955). The Educational Value of Marching Band. *Modern Marching Band Techniques* (8). Winona: Hal Leonard.

- Leedy, P. D., & Ormrod, J. E. (2005). *Practical research: Planning and design* (8th ed.). Upper Saddle River, NJ: Prentice Hall.
- McCabe, D.L., & Bowers, W.J. (1996). The relationship between student cheating and college fraternity and sorority membership. *NASPA Journal*, 33(4), 280-291.
- McCarrell, L. K. (1971). A historical review of the college band movement from 1875 to 1969. Unpublished doctoral dissertation, The Florida State University, Tallahassee.
- Milloy, C. (1993, May 5). The gangs called frats. *Washington Post*, pp. C1, 10
- Norman, G. & Streiner, D. (2008). *Biostatistics: The Bare Essentials* (3<sup>rd</sup> ed.). Shelton, CT: People's Medical Publishing House.
- Olmsted, D. W. (c1961). *Social groups, roles, and leadership: An introduction to the concepts*. East Lansing, Mich.: [Institute for Community Development and Services].
- Otto, R. (1971). Using Effective Organizational Aids. *Effective Methods for Building the High School Band Program*. West Nyack: Parker Publishing.
- Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows* (3rd ed.). Maidenhead: Open University Press.
- Park, A., Sher, K. J., & Krull, J. L. (2009). Dual mechanisms underlying accentuation of risky drinking via fraternity/sorority affiliation: The role of personality, peer norms, and alcohol availability. *Journal of Abnormal Psychology*, 118, 241-255.
- Pascarella, E.T., & Terenzini, P.T. (2005). *How college affects students: A third decade of research*. Jossey-Bass: San Francisco.
- Phi Mu Alpha Sinfonia - National Website. (n.d.). Phi Mu Alpha Sinfonia - National Website. Retrieved June 30, 2014, from <http://www.sinfonia.org>
- Pike, G. R. (2003). Membership in a fraternity or sorority, student engagement, and educational outcomes at AAU public research universities. *Journal of College Student Development*, 44(3), 369-382.
- Pike, G.R., & Askew, J.W. (1990). The impact of fraternity or sorority membership on academic involvement and learning outcomes. *NASPA Journal*, 28(1), 13-19.
- Raudenbush, S. W. & Liu, X. (2000). Statistical power and optimal design for multisite randomized trials. *Psychological Methods*, 5(2), 199-213. doi:10.1037/1082-989X.5.2.199
- Raudenbush, S. W., Spybrook, J., Congdon, R., Liu, X., Martinez, A., Bloom, H., & Hill, C. (2011). *Optimal Design Software for Multi-level and Longitudinal Research* (Version 3.01) [Software]. Available from [www.wtgrantfoundation.org](http://www.wtgrantfoundation.org).
- Raxsdale, B. (1985). Designing a System That Works. *The Marching Band Director*. New Berlin: Jenson Publications.

- Rost, J. C. (1993). *Leadership for the twenty-first century*. Westport, CT: Praeger.
- Rudolph, F. (1962). *The American college & university: A history*. Athens, GA: University of Georgia Press.
- Rush, S., & Lautzenheiser, T. (c 2006). *Habits of a successful band director : Pitfalls and solutions* (Rev. ed. ed.). Chicago: GIA Publications.
- Shaffer, R.H. (1983). Review of research in Greek affairs. In W.Bryan & R.
- Shieh, E. (2008). Developing leadership in the ensemble classroom. *Music Educators Journal*, 94(4), 46-51.
- SAI History. (n.d.). SAI History. Retrieved June 30, 2014, from <http://www.sainational.org/home/aboutsai/saihistory/tabid/63/default.aspx>
- Smith, Nick. (2011). Guide to Membership for the 2013–2015 Biennium. Stillwater, OK: Kappa Kappa Psi/Tau Beta Sigma. p. 88.
- Stein, R. (2008). Lead by example: How to be a "leader" without the title. Retrieved October 2, 2015, from <http://www.marching.com/spotlight/marching-band-student-leadership/>
- Tabachnick, B.G., & Fidell, L.S. (2007) *Using Multivariate Statistics*, Boston, MA: Pearson Education, Inc.
- "Tau Beta Sigma History". Tau Beta Sigma. Retrieved 2010-03-19.
- Taylor, J. (2008). Student Times: Student Leadership: Friend or Foe? Steps for Developing Effective Student Leadership. *The Choral Journal*, 49(4), 111-113.
- Thorsen, E. (1997). *Greek and non-Greek college and university alumni: Giving, community participation, and retrospective college satisfaction*. Columbia: University of Missouri-Columbia Center for Advanced Social Research.
- Tinto, V. (1988). Stages of student departure: Reflections on the longitudinal character of student leaving. *The Journal of Higher Education*, 59(4), 438-455.
- Triola, M. (1998). *Elementary statistics* (7th ed.). Reading, Mass.: Addison-Wesley.
- Washington State University. (2008). *Persistence and graduation rate: Greek vs. non-Greek*. Pullman, WA: Author.
- Welcome to Mu Phi Epsilon. (n.d.). Mu Phi Epsilon. Retrieved June 30, 2014, from <http://www.muphiepsilon.org/>
- Williamson, D. L. (c1982). *Group power : How to develop, lead, and help groups achieve goals*. Englewood Cliffs, N.J.: Prentice Hall.
- Wilson, T. (1986). Japanese Bands: What Makes Them So Good? *Music Educators Journal*, 72(5), 41-47.

Winston Jr., R., & Sanders, S. (1987). The Greek Experience: Friend or Foe of Student Development. In *Fraternities and Sororities on the Contemporary College Campus*. San Francisco: Jossey-Bass.

Wis, R. (2007). *The conductor as leader: Principles of leadership applied to life on the podium* (p. X). Chicago, Ill.: GIA Publication.

## APPENDIX A

### INTRODUCTION TO ELECTRONIC SURVEY

Greetings! My name is Nicholas Bratcher, and I would like to determine the impact of fraternal music organizations on student leadership in the college band program. In this survey, there are no right or wrong answers to the questions, just answers based on your individual experiences. This survey will take about 5 minutes of your time to complete, and I will use the results for a research study. We will not be able to identify you individually – please do not put your name on this survey. If you would prefer not to answer a question, please leave it blank. Your participation is voluntary and you can stop at any time. Please complete the survey and click the “Submit” button when you have finished. If you have any questions about this study, you may email Nicholas Bratcher at [nobratch@uga.edu](mailto:nobratch@uga.edu). Thank you for helping me with this research.

## APPENDIX B

### LETTER TO COLLEGE BAND DIRECTORS

Dear Band Director:

College fraternities and sororities have become cornerstones of undergraduate college life throughout the century, and many have academic affiliation that provides positive development opportunities to college students. In the case of music, many fraternal music organizations span across the country at an average of 200 college campuses, and many undergraduate band students are exposed either through direct participation or exposure through student life. I have obtained your contact information via your respective institution's website, and I am reaching out to you to determine the impact of fraternal music organizations on student leadership in college and university bands.

Below is a link to a short survey. I ask that you would forward this survey link to all of your student band leadership (*e.g. marching band officers, principal concert players, etc.*), regardless of membership in a fraternal music organization, and ask them to complete it. No information will be gathered that could personally identify the student. The survey is completely voluntary and should have no impact on the student's grade or class standing. By forwarding this link and asking your student leadership to complete the survey, you may help me better understand how fraternal music organizations will help to improve student leadership in the collegiate band program, and what impact, if any, membership in these organizations have on student leadership development in college bands. The link is listed below:

<https://www.surveymonkey.com/s/FMOLeadership>

If you have any questions, please do not hesitate to email Nicholas Bratcher at [nobratch@uga.edu](mailto:nobratch@uga.edu).

Sincerely,

Nicholas Bratcher  
Doctoral Candidate  
University of Georgia

APPENDIX C  
CONSENT LETTER

Dear Participant:

I am a graduate student under the direction of Dr. Mary Leglar in the School of Music at The University of Georgia. I invite you to participate in a research study entitled “Fraternal Music Organizations and their Impact on Student Leadership in College Bands”. The purpose of this study is to investigate the influence and outcomes of fraternal music organizations on student leadership in college and university bands.

To qualify to participate in this study, the participant must be a student leader in a college or university band program which houses at least two of the following six fraternal music organizations: (a) Kappa Kappa Psi, (b) Tau Beta Sigma, (c) Phi Mu Alpha, (d) Sigma Alpha Iota, (e) Mu Phi Epsilon, (f) Delta Omicron. The student may or may not be a member of these organizations in order to participate.

Your participation will involve the completion of an electronic survey and should only take about 10 minutes. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. If you decide to withdraw from the study, the information that can be identified as yours will be kept as part of the study and may continue to be analyzed, unless you make a written request to remove, return, or destroy the information.

Each participant’s name will remain confidential and will not be reported with results. All Institutional Review Board (IRB) guidelines will be followed throughout data collection, data analysis, and reporting for this study, which will help ensure the ethical treatment and protection of research participants. Only the researcher will have access to the data. The results of the research study may be published, but your name or any identifying information will not be used. In fact, the published results will be presented in summary form only.

The findings from this project may provide information on whether fraternal music organizations are effective in developing the student’s leadership, the organization, and the college band. There are no known risks or discomforts associated with this research. If you have any questions about this research project, please feel free to call Nicholas Bratcher at (843) 855-4350 or send an e-mail to [nobratch@uga.edu](mailto:nobratch@uga.edu). Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, 609 Boyd GSRC, Athens, Georgia 30602; telephone (706) 542-3199; email address [irb@uga.edu](mailto:irb@uga.edu).

By completing and returning this questionnaire in the envelope provided, you are agreeing to participate in the above described research project.

Thank you for your consideration! Please keep this letter for your records.

Sincerely,

Nicholas Bratcher

APPENDIX D

SURVEY INSTRUMENT

SECTION A

My gender is:

- Male
- Female

My class standing is:

- Freshman
- Sophomore
- Junior
- Senior

I currently:

- Hold membership in one or more FMOs (*KKY, TBS, PMA, SAI, MPE, DO*):
- Do NOT hold membership in an FMO:

The college/university where my band program is housed is:

---

SECTION B

LEVEL ONE

Instructions: The following items deal with your bandleader experience on a personal level. For each item, please indicate how you as an individual have changed because of your bandleader experience.

1	2	3	4	5
None/Not at all	A Little	Some	Much	A Great Deal

1. My school ensemble involvement increased:

1	2	3	4	5
---	---	---	---	---

2. I improved in self-confidence:

1	2	3	4	5
---	---	---	---	---

3. I improved in creative thinking:

1	2	3	4	5
---	---	---	---	---



4. I improved my business skills:

1                    2                    3                    4                    5

5. People describe me as being changed by my bandleader experience:

1                    2                    3                    4                    5

6. I was able to meet people whose success I could imitate:

1                    2                    3                    4                    5

7. I increased my awareness of the value of my time:

1                    2                    3                    4                    5

8. I learned the value of family because of my bandleader experience:

1                    2                    3                    4                    5

9. Exposure to new ideas and concepts led to my growth:

1                    2                    3                    4                    5

10. I learned I do not have to be in control:

1                    2                    3                    4                    5

11. My bandleader experience began a series of life changing events for me:

1                    2                    3                    4                    5

12. Leading others in band helped me to realize that I have the power to make a difference:

1                    2                    3                    4                    5

## LEVEL TWO

Instructions: The following items deal with your experience with band on an organizational level. For each item, please indicate how you or your organization professionally changed because of your bandleader experience.

1. I improved my business/organizational decision making skills:

1                    2                    3                    4                    5

2. I improved my networking skills:

1                    2                    3                    4                    5

3. I am able to respond to problems and situations more effectively:  

1	2	3	4	5
---	---	---	---	---
4. I became more innovative in my approach to problem-solving:  

1	2	3	4	5
---	---	---	---	---
5. I learned to make more efficient use of my time:  

1	2	3	4	5
---	---	---	---	---
6. The exposure to other people and ideas helped facilitate change:  

1	2	3	4	5
---	---	---	---	---
7. I became more involved in professional organizations:  

1	2	3	4	5
---	---	---	---	---
8. I became more efficient in my use of resources:  

1	2	3	4	5
---	---	---	---	---
9. My bandleader experience helped me to change the direction of my major/career:  

1	2	3	4	5
---	---	---	---	---
10. I developed the confidence to compete on a different level in my major/career:  

1	2	3	4	5
---	---	---	---	---
11. Being a bandleader helped me to build a better network of contacts:  

1	2	3	4	5
---	---	---	---	---

### LEVEL THREE

Instructions: The following items deal with your bandleader experience on a community/ensemble level. For each item, please indicate how your participation in the ensemble(s) changed because of your bandleader experience.

1. My bandleader experience helped to increase my involvement in local music ensembles:  

1	2	3	4	5
---	---	---	---	---
2. I became involved with music ensembles on a state level because of being a bandleader:  

1	2	3	4	5
---	---	---	---	---

3. I became involved with music ensembles on a national level because of being a bandleader:  
1                      2                      3                      4                      5
4. I became involved with music ensembles in other countries after my bandleader experience:  
1                      2                      3                      4                      5
5. I increased my awareness of the value of my time:  
1                      2                      3                      4                      5
6. Due to my band participation, I increase my involvement with community organizations:  
1                      2                      3                      4                      5
7. I reduced my commitment to some organizations to be more effective in other organizations:  
1                      2                      3                      4                      5
8. My appreciation of cultural differences increased due to my bandleader experience:  
1                      2                      3                      4                      5

APPENDIX E

TOTAL STUDENT RESPONSE FREQUENCIES

		My school ensemble involvement increased:	I improved in self-confidence:	I improved in creative thinking:	I improved my business skills:	People describe me as being changed by my bandleader experience:
N	Valid	340	339	339	338	339
	Missing	0	1	1	2	1

		I was able to meet people whose success I could imitate:	I increased my awareness of the value of my time:	I learned the value of family because of my bandleader experience:	Exposure to new ideas and concepts led to my growth:	I learned I do not have to be in control:
N	Valid	337	338	339	340	340
	Missing	3	2	1	0	0

		My bandleader experience began a series of life changing events for me:	Leading others in band helped me to realize that I have the power to make a difference:	I improved my business/organizational decision making skills:	I improved my networking skills:	I am able to respond to problems and situations more effectively:
N	Valid	340	340	317	315	316
	Missing	0	0	23	25	24

		I became more innovative in my approach to problem-solving:	I learned to make more efficient use of my time:	The exposure to other people and ideas helped facilitate change:	I became more involved in professional organizations:	I became more efficient in my use of resources:
N	Valid	316	315	316	317	315
	Missing	24	25	24	23	25

		My bandleader experience helped me to change the direction of my major/career:	I developed the confidence to compete on a different level in my major/career:	Being a bandleader helped me to build a better network of contacts:	My bandleader experience helped to increase my involvement in local music ensembles:	I became involved with music ensembles on a state level because of being a bandleader:
N	Valid	316	316	317	301	300
	Missing	24	24	23	39	40

		I became involved with music ensembles on a national level because of being a bandleader:	I became involved with music ensembles in other countries after my bandleader experience:	I increased my awareness of the value of my time:	Due to my band participation, I increase my involvement with community organizations:	I reduced my commitment to some organizations to be more effective in other organizations:
N	Valid	300	299	297	300	299
	Missing	40	41	43	40	41

		My appreciation of cultural differences increased due to my bandleader experience:
N	Valid	300
	Missing	40

APPENDIX F

STUDENT RESPONSE FREQUENCIES BY LEVELS

Level One: Individual

My school ensemble involvement increased:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid None/Not at all	27	7.9	7.9	7.9
A Little	26	7.6	7.6	15.6
Some	77	22.6	22.6	38.2
Much	115	33.8	33.8	72.1
A Great Deal	95	27.9	27.9	100.0
Total	340	100.0	100.0	

I improved in self-confidence:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid None/Not at all	12	3.5	3.5	3.5
A Little	24	7.1	7.1	10.6
Some	59	17.4	17.4	28.0
Much	127	37.4	37.5	65.5
A Great Deal	117	34.4	34.5	100.0
Total	339	99.7	100.0	
Missing System	1	.3		
Total	340	100.0		

I improved in creative thinking:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	14	4.1	4.1	4.1
	A Little	27	7.9	8.0	12.1
	Some	91	26.8	26.8	38.9
	Much	133	39.1	39.2	78.2
	A Great Deal	74	21.8	21.8	100.0
	Total	339	99.7	100.0	
Missing	System	1	.3		
Total		340	100.0		

I improved my business skills:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	25	7.4	7.4	7.4
	A Little	39	11.5	11.5	18.9
	Some	104	30.6	30.8	49.7
	Much	106	31.2	31.4	81.1
	A Great Deal	64	18.8	18.9	100.0
	Total	338	99.4	100.0	
Missing	System	2	.6		
Total		340	100.0		



People describe me as being changed by my bandleader experience:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	55	16.2	16.2	16.2
	A Little	53	15.6	15.6	31.9
	Some	103	30.3	30.4	62.2
	Much	79	23.2	23.3	85.5
	A Great Deal	49	14.4	14.5	100.0
	Total	339	99.7	100.0	
Missing	System	1	.3		
Total		340	100.0		

I was able to meet people whose success I could imitate:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	13	3.8	3.9	3.9
	A Little	24	7.1	7.1	11.0
	Some	62	18.2	18.4	29.4
	Much	124	36.5	36.8	66.2
	A Great Deal	114	33.5	33.8	100.0
	Total	337	99.1	100.0	
Missing	System	3	.9		
Total		340	100.0		

I increased my awareness of the value of my time:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	8	2.4	2.4	2.4
	A Little	18	5.3	5.3	7.7
	Some	41	12.1	12.1	19.8
	Much	136	40.0	40.2	60.1
	A Great Deal	135	39.7	39.9	100.0
	Total	338	99.4	100.0	
Missing	System	2	.6		
Total		340	100.0		

I learned the value of family because of my bandleader experience:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	30	8.8	8.8	8.8
	A Little	43	12.6	12.7	21.5
	Some	65	19.1	19.2	40.7
	Much	98	28.8	28.9	69.6
	A Great Deal	103	30.3	30.4	100.0
	Total	339	99.7	100.0	
Missing	System	1	.3		
Total		340	100.0		

Exposure to new ideas and concepts led to my growth:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid None/Not at all	11	3.2	3.2	3.2
A Little	24	7.1	7.1	10.3
Some	70	20.6	20.6	30.9
Much	143	42.1	42.1	72.9
A Great Deal	92	27.1	27.1	100.0
Total	340	100.0	100.0	

I learned I do not have to be in control:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid None/Not at all	20	5.9	5.9	5.9
A Little	58	17.1	17.1	22.9
Some	92	27.1	27.1	50.0
Much	94	27.6	27.6	77.6
A Great Deal	76	22.4	22.4	100.0
Total	340	100.0	100.0	

My bandleader experience began a series of life changing events for me:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid None/Not at all	37	10.9	10.9	10.9

A Little	52	15.3	15.3	26.2
Some	83	24.4	24.4	50.6
Much	74	21.8	21.8	72.4
A Great Deal	94	27.6	27.6	100.0
Total	340	100.0	100.0	

Leading others in band helped me to realize that I have the power to make a difference:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid None/Not at all	12	3.5	3.5	3.5
A Little	20	5.9	5.9	9.4
Some	65	19.1	19.1	28.5
Much	135	39.7	39.7	68.2
A Great Deal	108	31.8	31.8	100.0
Total	340	100.0	100.0	

Level Two: Organizational

I improved my business/organizational decision making skills:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	14	4.1	4.4	4.4
	A Little	37	10.9	11.7	16.1
	Some	80	23.5	25.2	41.3
	Much	118	34.7	37.2	78.5
	A Great Deal	68	20.0	21.5	100.0
	Total	317	93.2	100.0	
Missing	System	23	6.8		
Total		340	100.0		

I improved my networking skills:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	15	4.4	4.8	4.8
	A Little	38	11.2	12.1	16.8
	Some	82	24.1	26.0	42.9
	Much	115	33.8	36.5	79.4
	A Great Deal	65	19.1	20.6	100.0
	Total	315	92.6	100.0	
Missing	System	25	7.4		
Total		340	100.0		

I am able to respond to problems and situations more effectively:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	8	2.4	2.5	2.5
	A Little	17	5.0	5.4	7.9
	Some	60	17.6	19.0	26.9
	Much	136	40.0	43.0	69.9
	A Great Deal	95	27.9	30.1	100.0
	Total	316	92.9	100.0	
Missing	System	24	7.1		
Total		340	100.0		

I became more innovative in my approach to problem-solving:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	11	3.2	3.5	3.5
	A Little	20	5.9	6.3	9.8
	Some	83	24.4	26.3	36.1
	Much	121	35.6	38.3	74.4
	A Great Deal	81	23.8	25.6	100.0
	Total	316	92.9	100.0	
Missing	System	24	7.1		
Total		340	100.0		

I learned to make more efficient use of my time:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	10	2.9	3.2	3.2
	A Little	23	6.8	7.3	10.5
	Some	57	16.8	18.1	28.6
	Much	122	35.9	38.7	67.3
	A Great Deal	103	30.3	32.7	100.0
	Total	315	92.6	100.0	
Missing	System	25	7.4		
Total		340	100.0		

The exposure to other people and ideas helped facilitate change:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	12	3.5	3.8	3.8
	A Little	23	6.8	7.3	11.1
	Some	88	25.9	27.8	38.9
	Much	121	35.6	38.3	77.2
	A Great Deal	72	21.2	22.8	100.0
	Total	316	92.9	100.0	
Missing	System	24	7.1		
Total		340	100.0		

I became more involved in professional organizations:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	54	15.9	17.0	17.0
	A Little	49	14.4	15.5	32.5
	Some	73	21.5	23.0	55.5
	Much	81	23.8	25.6	81.1
	A Great Deal	60	17.6	18.9	100.0
	Total	317	93.2	100.0	
Missing	System	23	6.8		
Total		340	100.0		

I became more efficient in my use of resources:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	10	2.9	3.2	3.2
	A Little	36	10.6	11.4	14.6
	Some	84	24.7	26.7	41.3
	Much	129	37.9	41.0	82.2
	A Great Deal	56	16.5	17.8	100.0
	Total	315	92.6	100.0	
Missing	System	25	7.4		
Total		340	100.0		



My bandleader experience helped me to change the direction of my major/career:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	148	43.5	46.8	46.8
	A Little	40	11.8	12.7	59.5
	Some	44	12.9	13.9	73.4
	Much	39	11.5	12.3	85.8
	A Great Deal	45	13.2	14.2	100.0
	Total	316	92.9	100.0	
Missing	System	24	7.1		
Total		340	100.0		

I developed the confidence to compete on a different level in my major/career:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	44	12.9	13.9	13.9
	A Little	48	14.1	15.2	29.1
	Some	70	20.6	22.2	51.3
	Much	87	25.6	27.5	78.8
	A Great Deal	67	19.7	21.2	100.0
	Total	316	92.9	100.0	
Missing	System	24	7.1		
Total		340	100.0		

Being a bandleader helped me to build a better network of contacts:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	13	3.8	4.1	4.1
	A Little	36	10.6	11.4	15.5
	Some	81	23.8	25.6	41.0
	Much	98	28.8	30.9	71.9
	A Great Deal	89	26.2	28.1	100.0
	Total	317	93.2	100.0	
Missing	System	23	6.8		
Total		340	100.0		

Level Three: Community

My bandleader experience helped to increase my involvement in local music ensembles:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	83	24.4	27.6	27.6
	A Little	53	15.6	17.6	45.2
	Some	81	23.8	26.9	72.1
	Much	53	15.6	17.6	89.7
	A Great Deal	31	9.1	10.3	100.0
	Total	301	88.5	100.0	
Missing	System	39	11.5		
Total		340	100.0		

I became involved with music ensembles on a state level because of being a bandleader:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	163	47.9	54.3	54.3
	A Little	38	11.2	12.7	67.0
	Some	45	13.2	15.0	82.0
	Much	35	10.3	11.7	93.7
	A Great Deal	19	5.6	6.3	100.0
	Total	300	88.2	100.0	

Missing System	40	11.8		
Total	340	100.0		

I became involved with music ensembles on a national level because of being a  
bandleader:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	210	61.8	70.0	70.0
	A Little	36	10.6	12.0	82.0
	Some	27	7.9	9.0	91.0
	Much	14	4.1	4.7	95.7
	A Great Deal	13	3.8	4.3	100.0
	Total	300	88.2	100.0	
Missing System		40	11.8		
Total		340	100.0		

I became involved with music ensembles in other countries after my bandleader  
experience:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	252	74.1	84.3	84.3
	A Little	16	4.7	5.4	89.6
	Some	15	4.4	5.0	94.6
	Much	9	2.6	3.0	97.7

	A Great Deal	7	2.1	2.3	100.0
	Total	299	87.9	100.0	
Missing	System	41	12.1		
Total		340	100.0		

I increased my awareness of the value of my time:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	11	3.2	3.7	3.7
	A Little	35	10.3	11.8	15.5
	Some	66	19.4	22.2	37.7
	Much	98	28.8	33.0	70.7
	A Great Deal	87	25.6	29.3	100.0
	Total	297	87.4	100.0	
Missing	System	43	12.6		
Total		340	100.0		

Due to my band participation, I increase my involvement with community organizations:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	44	12.9	14.7	14.7
	A Little	69	20.3	23.0	37.7
	Some	91	26.8	30.3	68.0

	Much	63	18.5	21.0	89.0
	A Great Deal	33	9.7	11.0	100.0
	Total	300	88.2	100.0	
Missing	System	40	11.8		
Total		340	100.0		

I reduced my commitment to some organizations to be more effective in other organizations:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	57	16.8	19.1	19.1
	A Little	56	16.5	18.7	37.8
	Some	89	26.2	29.8	67.6
	Much	69	20.3	23.1	90.6
	A Great Deal	28	8.2	9.4	100.0
	Total	299	87.9	100.0	
Missing	System	41	12.1		
Total		340	100.0		

My appreciation of cultural differences increased due to my bandleader experience:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None/Not at all	35	10.3	11.7	11.7
	A Little	56	16.5	18.7	30.3

	Some	80	23.5	26.7	57.0
	Much	74	21.8	24.7	81.7
	A Great Deal	55	16.2	18.3	100.0
	Total	300	88.2	100.0	
Missing	System	40	11.8		
Total		340	100.0		