Instructors’ Perceptions of the National Association of Schools of Music Influence on the Development of Undergraduate Applied Percussion Curricula

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Instructors’ Perceptions of the National Association of Schools of Music Influence on the Development of Undergraduate Applied Percussion Curricula

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Abstract

Previous research on applied percussion curricula focused on task completion, teaching methodology, and descriptive analyses. However, an examination of educational standards in applied percussion has not occurred. The primary purpose of this study was to examine the influence of the National Association of Schools of Music (NASM) standards in developing applied percussion curricula. Additionally, it investigated if barriers (finances, equipment, and facilities) and external factors (administrators, colleagues, professional organizations, and professional development) affect the implementation of standards, and if barriers, external factors, and the essential nature of standards were associated with the existence of standards. Neglecting to meet standards could preclude students from obtaining requisite teaching and performance skills. A non-experimental quantitative design was used to examine instructor perception of barriers, external factors, and implementation of standards into teaching curricula. The relationship between instructor characteristics (years of teaching, level of education, and teaching contract) and perceptions was examined. Sixty-four percussion instructors completed a survey in which they reported what they perceived influenced curriculum development. Analyses revealed the NASM standards were essential and exist; there were barriers; and curricula were developed in isolation. Data indicated a significant ($p < .05$) relationship between external factors and the existence of standards such that as perceptions of external factors increased, perceptions increased for the existence of standards. Similar results occurred between the essential nature and existence of standards. Significance was also achieved for the existence of standards and years of teaching such that instructors with > 30 years of teaching agreed more strongly with the
existence of standards compared to additional groupings based on years of teaching. Tenured instructors agreed more strongly with the existence of standards compared to adjunct, part-time, and full-time contract instructors. Moreover, significance was achieved for barriers and teaching contract such that full-time contract instructors agreed more strongly that barriers influenced curriculum development compared to other contract groupings. Non-significant results for the remaining ten hypotheses, which paired instructors’ perceptions and characteristics, may be due to insufficient power. These results could be used to re-evaluate curricula, professional development, and how instructors meet standards. Finally, data added to the knowledge base by analyzing curricula through a standards-based framework.
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Chapter 1: Introduction

Recently, there has been a renewed interest in the direction and content of applied music curricula (Gaunt, 2007; Parkes, 2009; Ruch, 2009; Wexler, 2009). Previous research indicated an underlying disagreement in regards to compliance of undergraduate music curricula with the National Association of Schools of Music (NASM) standards (Johnson, 2010; Rege, 2008; Ruch, 2009). For the purpose of this study, there was an interest in the role of the NASM standards in applied percussion; criteria similar to those of the NASM have been suggested as basic guidelines for the development of percussion curricula (Steele, 1988). Many supported the need for compliance by suggesting that the consensus-based NASM standards accounted for the observations, experiences, and considered opinions of thousands of professionals (Hope, 2007). The standards are the result of negotiations with multiple realities with respect not only to the variety of degrees and specializations within music, but also the differences between how schools and instructors address the NASM standards (Hope, 2007).

On the contrary, an inappropriate use of the NASM standards can clearly be a force for standardization (Colwell, 2006). Some educators believe that standards are provincial in nature and have the potential to undermine efforts to create balanced curricula (Sleeter, 2002; Essex, 2010). Additionally, standards may threaten the personal nature of music by requiring similar goals and objectives without regard to individual skill sets and ability (Willet, 1978). To that end, any attempt to initiate standardization could preclude individuality, creativity, and variety in programs, possibly nullifying the system of balance and choice that percussionists possess (Clyde, 2001).

Concern over the nature of a standardized curriculum is valid, but the NASM standards represent a common framework providing latitude for creative use by faculty,
students, and institutions (NASM, 2009). NASM does not impose an arbitrary taxonomy of activities and timelines. The guidelines articulate that materials used within a course of study are at the discretion of the school and instructor as long as the intent of the standards is met. Nonetheless, it may be difficult to adhere to the standards since there are competing interests. The combination of mandates from state certification and accreditation bodies may limit the degree to which standards are met (Colwell, 2006).

Professional music organizations are important to the role of standards in applied music. Over the years, there have been seminars at the Percussive Arts Society International Convention (PASIC) to establish common goals and standards [emphasis added] as well as experiment with curriculum development (Petercsak, 1974). For example, in 1997 members of the PAS College Pedagogy Committee (CPC) created the Standards for the College Percussion Methods Class. This was the first set of percussion standards in line with the NASM, though not for applied percussion. However, PASIC 2001 held a seminar entitled: Influences on Revising Percussion Curricula for the Undergraduate. It partly focused on the NASM standards in applied curricula.

For this research applied percussion will refer to undergraduate music majors whose primary instrument is percussion. Applied percussion students require seven to eight semesters of private instruction, though group instruction is not uncommon for underclassmen. Moreover, percussion students may major in one or more of the 12 accredited NASM specializations. This chapter will introduce the (a) background, (b) problem statement, (c) purpose statement, (d) theoretical framework, (e) research questions, (f) hypotheses, (h) nature of the study, (i) significance of the study, and (j) definitions.
Background

Debate regarding the direction of undergraduate applied percussion curricula has intensified over the past decade (Nave, 2001). However, formal research examining the influence of the NASM standards in the field of applied percussion has not occurred. Evaluation of applied music (private instruction) in higher education settings is under-investigated (Bergee, 2003; Kennell, 2002). Content has been limited to seminar discussions at percussion conventions, such as the Percussive Arts Society International Convention (Steele, 1988; College Pedagogy Committee, 2001). In regards to formal research on percussion curricula, most studies have been descriptive in nature and focused on the taxonomy and structure of tasks covered in the applied percussion lesson, rather than the curriculum development process (Fisher, 2004; Nave, 2001). Secondly, previous studies and guidelines have served as historical updates, rather than an impetus for change (Nave, 2001; Paglialonga, 2010). Moreover, most scholarly research in percussion has investigated curricula of a single focus, such as Morgan’s (1993) research on drum set curricula. Although Morgan’s study was in-depth and extremely helpful to the aspiring drum set teacher and student, studies of this nature have not linked how the drum set curriculum connects to the entire percussion curriculum, addresses NASM standards, or fits within the time constraints that teachers face when devising an 8-semester outline for undergraduate students.

Nevertheless, there is explicit support for implementing the NASM standards in applied percussion. Specifically, the University of Central Florida applied percussion program aligned each facet of the curriculum with the NASM Common Body of Knowledge and Skills (Moore, 2001). However, the use of the standards is not a call for
standardization; rather, it is support for an organized framework based on NASM accreditation guidelines (College Pedagogy Committee, 2001; Hope, 2007). Nonetheless, in order to develop curricula in line with the NASM standards, a thorough discussion is needed to determine the role of the individual instructor. To what degree do instructors have autonomy in developing curricula? Do instructors defer to the department chair or a standards-based agenda, such as the NASM (Franklin, Fisher & Ragsdale, 2009)?

More recently, notable research studies have focused on the importance of standards in applied music, though in areas outside of applied percussion. These studies addressed the need to consider the NASM standards when developing music curricula as a means to adequately prepare students for future employment (Essex, 2010; Johnson, 2010; Rege, 2008; Ruch, 2009). They used the lack of prior research as a platform to establish a foundation for examining the influence of the NASM standards in applied vocal, music theory, music technology, and music education curricula.

From a theoretical perspective, it was important to research possible reasons why applied instructors did not seemingly adhere to the NASM standards. For example, it is possible that college instructors of all specialties lack formal pedagogical training, thereby limiting their ability to develop curricula (Stark & Lattuca, 1997). It is also possible that there is a degree of isolation and territorialism in applied music (Fredrickson, 2007; Parkes, 2009; Wexler, 2009). Thus, administrators may not have oversight of the curriculum development process, possibly creating an atmosphere that lacks consensus (Johnson, 2010). In turn, these areas were studied in order to accurately discern the influence of the NASM standards on applied music curricula.
Problem Statement

Although learning outcomes and goals for a percussion program within a given institution will vary, these goals must meet some basic criteria in order to be successful (Franklin et al., 2009). In this instance, goals may refer to incorporating percussion standards that prepare students for the workplace. Unfortunately, there have been few comprehensive attempts to examine factors that influence applied percussion curricula development (Fisher, 2004; Nave, 2001). These authors along with Steele (1988) created surveys that were informative documents, though they focused on content rather than the development process or adherence to standards. There is also the position that applied percussion must be individually tailored; an overly formalized approach may be construed as standardization (Beck, 1978). Thus, instructors may resist standards to avoid threats to artistic and pedagogical freedom. However, it is also possible that instructors are influenced by long-established cultural norms that engender a resistance to a change in curricula (Fredrickson, 2007; Gaunt, 2007; Shulman, 2004; Wexler, 2009).

Nonetheless, NASM institutions are “responsible for participating in revisions and additions to the standards as well as maintaining compliance with them as they are developed” (NASM, 2009, p. 16). Irrespective of specialization, students must acquire the NASM Common Body of Knowledge and Skills that constitute a foundation for work and continuing growth as music professionals (NASM, 2009). However, NASM does not require courses to align with every standard, though it is clear that standards shall be integrated throughout the music curriculum. In turn, applied curricula may lack explicit reference to the NASM guidelines. The problem is percussion programs may not meet the intent of the NASM standards, though the degree to which each standard is met is
determined by specialization and individual need. Neglecting to meet standards could prove problematic since students may lack requisite skills to succeed in the teaching and performance environments (Rege, 2008; Ruch, 2009). In addition, determining the influence of the NASM standards is important since willful neglect could be indicative of institutional norms that are contrary to standards based initiatives and whether schools of music value the NASM framework.

**Purpose Statement**

The purpose of this quantitative research study was to determine if the NASM standards influenced the development of undergraduate applied percussion curricula. Additional purposes were to determine if barriers and external factors affect the implementation of standards, and if barriers, external factors, and/or the essential nature of standards were associated with the existence of the NASM standards in current applied percussion curricula. For this study, barriers were finances, equipment, and facilities. External factors were administrators, colleagues, professional organizations, and professional development opportunities. The sample was non-probabilistic, purposive, and heterogeneous, consisting of 350 undergraduate percussion instructors from NASM Regions 6 and 7. A self-designed cross-sectional web survey via Survey Monkey was used to assess and measure data. This study used descriptive statistics (frequency distributions, mean, median, mode, and standard deviation), Cronbach’s Alpha, Kruskal-Wallis test, Games-Howell *post hoc* test, and Spearman's Rank Order Correlation Coefficient to conduct statistical analyses.

Specifically, the research focused on whether applied percussion curricula addressed the NASM Common Body of Knowledge and Skills and degree requirements
as outlined in Section VIII (All Professional Baccalaureate Degrees in Music and All Undergraduate Degrees Leading to Teacher Certification) in the *NASM 2009-2010 Handbook* (NASM, 2009). These included (a) performance, (b) musicianship skills and analysis, (c) composition and improvisation, (d) history and repertory, (e) technology, and (f) synthesis (NASM, 2009). Although there may be a perception that outlining common areas of emphasis is standardization, this was not the objective. NASM does not impose an arbitrary taxonomy of activities and timelines for applied music. The NASM guidelines clearly articulate that materials used within a course of study are at the discretion of the school of music and individual instructor as long as the intent of the standards is met.

This quantitative study investigated four dependent variables based on respondents’ perceptions and three independent variables based on demographic categories (Years of Teaching, Level of Education, and Teaching Contract). Dependent variables, based on descriptive statistics, included the extent to which respondents agreed (perceptions) that the NASM standards were essential for the undergraduate curriculum; the extent to which respondents agreed (perceptions) that NASM standards existed in the undergraduate curriculum; the extent to which respondents agreed (perceptions) that there were barriers to curriculum development; and the extent to which respondents agreed (perceptions) that external factors influenced curriculum development. Additionally, the study investigated differences in median agreement (perceptions) according to demographic variables (independent). Finally, the intended audience was undergraduate percussion instructors, aspiring instructors, and schools of music administrators.
Theoretical Framework

Historically there has been a distinction made between different kinds of teacher knowledge (Shulman, 2004; Wexler, 2009). Shulman’s research in the 1980s focused on the diverse nature of content knowledge. There are three different domains of content knowledge: (a) subject matter content knowledge, (b) pedagogical content knowledge, and (c) curricular content knowledge (Wexler, 2009). Subject matter refers “to the amount and organization of knowledge per se in the mind of the teacher” (Shulman 2004, p. 201). Pedagogical knowledge refers to one’s ability or knowhow of teaching or conveying material (Wexler, 2009). Curricular knowledge refers to the organizational structure and sequence of materials and how they fit into the greater whole (Shulman, 1986). Also, curricular knowledge refers to a transdisciplinary perspective - one’s ability to relate content across courses and lessons simultaneously (synthesize). However, it is apparent that subject knowledge and pedagogy were treated exclusively rather than integrating aspects of the two knowledge bases, possibly creating an inflexible preparatory system that does not synthesize teaching skills (Shulman, 1987). Thus, the need for a more coherent theoretical framework has become rapidly apparent (Shulman, 2004).

The main part of Shulman’s theory on content knowledge was that teaching will remain stagnant if teachers are not trained in a manner which encourages a thoughtful interweaving of the three content domains. Combining the three forms of teacher knowledge would present a synergy that propels education forward (Hofer and Swan, 2009). This is referred to as the missing paradigm in education (Shulman, 1986).
Recent research in applied music has used Shulman’s (1986) theory, including definitions of principles, maxims, and norms as a means to investigate instructor’s pedagogical content knowledge (Wexler, 2009). Principles refer to views that are derived from empirical research, something demonstrated via scholarly study. In this theoretical context, principles may be explicit rules, based on research, that teachers feel are central to successful teaching (Wexler, 2009; Kennell, 1997). Maxims do not make theoretical, but rather practical claims that have never been confirmed by research (Shulman, 1987). Norms refer to the values, goals, and attitudes held in a given culture or environment (Shulman, 1986; Wexler, 2009).

This study, like Wexler’s (2009), focused on the extent those norms in teaching influenced pedagogical content knowledge, while also investigating curricular content knowledge. More specifically, this research study attempted to determine how norms in the percussion community influenced the use of the NASM standards in developing applied percussion curricula. This was in line with purpose of this study: to determine if the NASM standards influenced the development of undergraduate applied percussion curricula. Finally, Wexler investigated whether teachers of different instrumental groups shared attitudes and goals whereas this study focused wholly on percussion instructors.

Previous research provided supporting evidence that applied music teachers did not differ much in attitudes, strategies, and goals (Wexler, 2009). Studies on string education or vocal performance noted no statistically significant or minimally significant differences among string or vocal faculty regardless of years of teaching (Lesniak, 2008; Ruch, 2009). Other studies indicated commonality and no significant difference even when including all instrumental areas (Wexler, 2009). In total, a common element in
previous research was that applied instructors tend to resist change or challenge the status quo that has been established by the long tradition of instrumental and vocal instruction (Burdett, 2007; Colwell, 1991; Gaunt, 2007). This suggests that there is a cultural norm that strongly influences a majority of instructors in applied music.

As stated previously, this study used Shulman’s position on norms as means to investigate the influence of the NASM standards on the development of applied percussion curricula. Specifically, norms established amongst applied instructors enabled this study to ascertain if limited development in curricular and pedagogical content knowledge was a factor in creating standards-based curricula. In order to do so, it was necessary to investigate why certain norms in collegiate music programs have come into being. These included peripheral issues which may have perpetuated norms, such as potential lack of administrative oversight and professional development.

Research has demonstrated that a lack of administrative oversight and professional development opportunities are norms, contributing to the acceptance of the status quo (Fredrickson, 2007; Gaunt, 2007; Stark & Lattuca, 1997; Wexler, 2009). The status quo has possibly engendered a degree of isolation, territorialism, and fragmentation of curricula. In fact, the closed door setting supporting the teacher-student dyad makes it difficult to formally investigate and adequately address the aforementioned issues that seem to be perpetuated by the secretive nature of applied music (Parkes, 2009). The secretive environment is advanced when administrators, in part, look the other way and permit instructors to conduct daily business without supervision or oversight on matters affecting curriculum and student development (Stark & Lattuca, 1997).
Isolation may be based on constancy of practice, meaning that drastic change is not commonplace (Stark & Lattuca, 1997). Wexler (2009) stated, The studio (applied music) community does not generally communicate much among colleagues. Communication among studio teachers on teaching issues is generally nonexistent….The studio has traditionally been a private, hidden locale; almost akin to a religious sanctuary, certainly outside the bounds of rational scientific inquiry. (p. xi)

Studies on applied music revealed that teachers also indicated that they had little engagement with the wider context of student learning in the school (Gaunt, 2007).

On the other hand, pedagogical training seems to be in short order. Teachers of all stripes lack pedagogical opportunities (Shulman, 2005; Stark & Lattuca, 1997). Since faculty members in higher education rarely receive direct preparation to teach, they most often model their own teaching after that which they themselves received (Shulman, 2005). The same is true for applied music teachers (Burdett, 2007; Gaunt, 2007; Fredrickson, 2007). Applied teachers have little or no public school music teaching experience and, in turn, they struggle to recognize and address the needs of music educators who teach students outside of his or her specialty (Burdett, 2007). In fact, it has been noted that schools of music are more concerned with strengthening prospective teachers’ performance skills rather than strengthening the pedagogical aspects of applied music (Fredrickson, 2007). Also, instructors and school administrators were found to have very little agreement on music competencies; in a sense they lack consensus (Paglialonga, 2010). This is due in part to a system which condones a scattered process in terms of evaluation and planning (Parkes, 2009). To that end, it is conceivable that
teachers are developing curricula that does not meet the NASM language. In effect, there is a lack of synergy in terms of combining the three domains of content knowledge. Thus, this suggests an acceptance of a system which ignores what Shulman (1986) referred to as the missing paradigm.

In summary, teachers must master not only content knowledge in order to succeed, but also possess the ability to create synergy (Shulman, 1986, 1987, 2004, & 2005). Content knowledge includes subject matter, pedagogical, and curricular knowledge. Recent research suggested that applied music instructors lacked content knowledge proficiency, specifically in the areas of pedagogical and curricular knowledge. This may provide a theoretical explanation on whether or not percussion instructors use the NASM standards to develop applied curricula.

Research Questions

The intent of the following research questions was to gather data that contribute to the area of study. The research base included 19 percussion syllabi from NASM Regions 6 and 7 along with numerous articles and dissertations on this very subject. These foundational elements enabled the development of viable research questions. Each question served as a category for which survey questions were developed. Also, the hypotheses were predictions based on prior literature and studies on topics similar to the proposed dissertation.

Q1. To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills is essential to the undergraduate percussion curriculum?
Q2. To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills exists in the current undergraduate percussion curriculum?

Q3. To what extent do percussion instructors perceive funding, equipment, and facilities serve as barriers in developing students’ common body of knowledge and skills as specified by the NASM standards?

Q4. To what extent do percussion instructors perceive that external factors such as administrators, colleagues, professional organizations, and professional development influence the development of the undergraduate percussion curricula in accordance with the NASM Common Body of Knowledge and Skills?

Q5. Based on years of teaching, level of education, and teaching contract, what differences exist in percussion instructors' perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum?

Q6. Based on years of teaching, level of education, and teaching contract, what differences are there in percussion instructors' perceptions that the NASM Common Body of Knowledge and Skills exists in the current undergraduate percussion curriculum?

Q7. Based on years of teaching, level of education, and teaching contract, what differences exist in percussion instructors' perceptions that barriers (finances, equipment, and facilities) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills?

Q8. Based on years of teaching, level of education, and teaching contract, what differences exist in percussion instructors' perceptions that external factors (administrators, colleagues, professional development, and professional organizations)
influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills?

Q9. Is there a relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula?

Q10. Is there a relationship between instructors’ perceptions of external factors that influence the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula?

Q11. Is there a relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula?

**Hypotheses**

H10. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H1a. Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H20. Based on level of education, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.
H2a. Based on level of education, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H3b. Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H3a. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H4b. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H4a. Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H5b. Based on level of education, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H5a. Based on level of education, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.
H6₀. Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H6ₐ. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H7₀. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that barriers (finances, equipment, and facilities) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H7ₐ. Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H8₀. Based on level of education, there is no significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H8ₐ. Based on level of education, there is a significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.
H9. Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H9a. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H10. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that external factors (administrators, colleagues, professional development, and professional organizations) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H10a. Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H11. Based on level of education, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H11a. Based on level of education, there is a significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate...
percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H120: Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H12 a: Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H130: There is no significant relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

H13 a: There is a significant relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

H140: There is no significant relationship between instructors’ perceptions that external factors influence the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

H14 a: There is a significant relationship between instructors’ perceptions that external factors influence the development of applied percussion curricula and
instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

**H15₀**: There is no significant relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

**H15₁**: There is a significant relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

**Nature of the Study**

A non-experimental quantitative design from a postpositivist paradigm was optimal for the proposed research. This study investigated four dependent variables based on respondents’ perceptions and three independent variables based on demographic categories (Years of Teaching, Level of Education, and Teaching Contract). Dependent variables, based on descriptive statistics, included the extent to which respondents agreed (perceptions) that the NASM standards were essential for the undergraduate curriculum; the extent to which respondents agreed (perceptions) that NASM standards existed in the undergraduate curriculum; the extent to which respondents agreed (perceptions) that there were barriers to curriculum development; and the extent to which respondents agreed (perceptions) that external factors influenced curriculum development. Additionally, the study investigated differences in median agreement (perceptions) according to demographic variables (independent). This study investigated the extent to which
respondents’ perceptions of external factors, barriers, and essential nature of standards were associated with the existence of the NASM standards in the undergraduate curriculum. Finally, the intended audience was undergraduate percussion instructors, aspiring instructors, and schools of music administrators.

In order to discern the influence of the specified variables, a web-based cross-sectional survey consisting of 58 questions was used to gather data. Since a careful search of the literature provided no already validated survey instrument to measure the variables in this study accurately, the study used a researcher-developed survey instrument to satisfy this investigation (Hillbrick, 1999). Moreover, the intent was to mitigate concerns about threats to external and construct validity. This was achieved by accounting for input received from members of the Percussive Arts Society College Pedagogy Committee, members of the National Conference on Percussion Pedagogy, and several hand-selected instructors during the survey development process.

Using comparative statistics, the study attempted to discover the magnitude of the differences between groups in reference to the dependent and independent variables (Douglas, 2009). In order to set the foundation for statistical analyses, research questions 1-4 used descriptive statistics to aggregate instructors’ perceptions of the NASM standards. Differences between groups were accomplished in hypotheses 1-12, which were based on research questions 5-8. Additionally, the study measured the relationship between instructors’ perceptions. This was accomplished in hypotheses 13-15, which were based on research questions 9-11. The primary means of analysis were (a) descriptive statistics (frequency distributions, mean, median, mode, and standard deviation), (b) Cronbach’s Alpha, (c) Kruskal-Wallis test, (d) Games-Howell *post hoc*
test, and (e) Spearman Rank Order Correlation Coefficient. All statistical analyses were performed via SPSS 19.0 for Windows 7.

**Significance of the Study**

The present study is significant for several reasons. First, evaluation of applied music (private instruction) in higher education settings has been under-investigated (Bergee, 2003; Kennell, 2002). Secondly, this study emphasized a comprehensive structure, similar to previous research accomplished by Fisher (2004) and Nave (2001). They focused on the taxonomy of content and structure in applied percussion throughout the United States and Puerto Rico. However, this study built upon their research by examining the process of developing curricula via the NASM standards. Similar to Rege (2008) and Ruch (2009), it was of importance to gather data that analyzed instructors’ perceptions of standards and how they were utilized and/or integrated across the music curriculum. In essence, the intent of the research was not to tell the reader what instructors include in the curriculum, but how they go about developing curricula relative to the NASM standards. This study added an analytical and theoretical contribution to the study of applied percussion.

Students and teachers alike may significantly benefit from a revived discussion on the direction and content of applied percussion curricula. At a minimum, the results identified applied percussion instructors’ perceptions of standards-based curricula and if they devised curricula that was in line with the NASM standards. Moreover, it was healthy to examine curricula and to question the status quo (Essex, 2010). To that end, continual research of percussion curricula should serve as an historical update; keep the
issue at the forefront; and encourage instructors to review and revise curricula on a regular basis.

Definitions

**National Association of Schools of Music.** The association is a member of the National Office for Arts Accreditation (NOAA). It is the national accrediting agency for music and music-related disciplines. The association also establishes standards, produces statistical research, provides professional development for leaders of music schools, and engages in policy analysis. It consists of 625 schools, conservatories, colleges, and universities spread across nine regions. Membership is gained only through the peer review process (NASM, 2009).

**Applied Music.** The term is customarily used to describe the teaching of instrumental or vocal performance (Wexler, 2009). All (performance) music instruction can be reduced to the classic dyad of teacher and student (Kennell, 2002).

**Conservatory.** By tradition a conservatory is a school that offers highly specialized training predominantly for the musical profession of performance (Hendrich, 1978).

**NASM Common Body of Knowledge and Skills.** They are also referred to as the NASM standards. Degree requirements as outlined in Section VIII (All Professional Baccalaureate Degrees in Music and All Undergraduate Degrees Leading to Teacher Certification) in the *NASM 2009-2010 Handbook*. These include (a) performance, (b) musicianship skills and analysis, (c) composition and improvisation, (d) history and repertory, (e) technology, and (f) synthesis (NASM, 2009).
National Conference on Percussion Pedagogy. This is an annual conference designed to provide a forum for elementary and secondary music educators, university percussion pedagogues, professional percussionists, university music education specialists, and undergraduate and graduate students to explore the status of percussion pedagogy in the United States as well as to outline strategies for improving the teaching and learning of percussion instruments (NCPP, 2009).

National Association of College Wind and Percussion Instructors. The association is a forum for communication within the profession of applied music on the college campus. The association is composed of university, college, and conservatory teachers. It is dedicated to encouraging and developing more effective teaching of wind and percussion instruments on the college level; providing the efficient interchange of information, ideas, and materials among the members; encouraging the publication, recording, composition, and distribution of good music for wind and percussion instruments; fostering the development and manufacture of the best in wind and percussion instruments; coordinating the activities of the membership with other groups having common interests; and encouraging the performance of solo and chamber music in which wind or percussion instruments have significant roles (NACWPI, 2010).

Percussive Arts Society. This is a music service organization that promotes percussion education, research, performance, and appreciation throughout the world. Today, there are 8,500 members, with 50 chapters located across the United States, and an additional 28 international chapters (PAS, 2010).
**PAS College Pedagogy Committee.** The purpose of the committee is to promote and enhance exploration, improvement, elevation, and facilitation of the craft of percussion at every level of college teaching (PAS, 2010).

**Percussion Methods.** The percussion methods course is designed to teach future music educators about percussion and is required for non-percussionists in most college music education curriculums. Any instrumentalist in a music education program usually is required to take separate methods courses covering each instrument in the woodwind, brass, string, and percussion categories. The purpose of each techniques class is to teach the physical aspects, basic playing technique, care and repair, beginning to intermediate literature, and basic methods of pedagogy for each instrument. Typically, each of these subdivisions is addressed in a one-semester class (Hillbrick, 1999).

**Summary**

This quantitative research study attempted to determine if the NASM standards influenced the development of undergraduate applied percussion curricula in NASM Regions 6 and 7. Additionally, the purpose was to determine if barriers and external factors affect the implementation of standards, and if barriers, external factors, and/or the essential nature of standards were associated with the existence of the NASM standards in current applied percussion curricula. Specifically, the research focused on whether applied percussion curricula addressed the NASM Common Body of Knowledge and Skills and degree requirements as outlined in Section VIII (All Professional Baccalaureate Degrees in Music and All Undergraduate Degrees Leading to Teacher Certification) in the *NASM 2009-2010 Handbook* (NASM, 2009). The research used 11 research questions and a 58-question survey. Research questions were developed from
existing literature and instructor input in order to determine the degree of influence. The research questions and survey explored the relationship between demographic data (independent variables) and instructors’ perceptions (dependent variables) on the essential nature and existence of the NASM standards, barriers, and external factors that influenced the development of applied percussion curricula.
Chapter 2: Literature Review

This section will present literature that is in line with the purpose of the research. Specifically, the purpose of this quantitative analysis was to focus on whether undergraduate applied percussion curricula addressed the NASM Common Body of Knowledge and Skills and degree requirements as outlined in Section VIII in the *NASM 2009-2010 Handbook* (NASM, 2009). Secondly, it was important to examine barriers to student development; instructors' perceptions on the essential knowledge and skills; and differences in perception regarding what should be in the curriculum. Additionally, the study examined the influence of school of music administrators, colleagues, professional organizations, and professional development opportunities.

Over the past 40 years, there has been notable discussion about the NASM standards in conjunction with applied percussion curricula, but mainly in an ancillary fashion. In fact, there is little research focusing directly on the influence of the NASM standards in applied percussion. Therefore, the literature review encompassed many areas of percussion, music education, general education, and included research from 1968 to present day.

The literature review was broken down into seven categories. It presented a wide array of opinions - historical, theoretical, and practical - on issues concerning standards-based agenda in undergraduate applied music. These categories include (a) examining the NASM background and impact on curriculum development, (b) foundational research on applied percussion curricula, (c) applied percussion dissertations and handbooks, (d) impact of professional organizations, (e) applied music research other than percussion, and (f) peripheral issues.
The final category presented peripheral issues derived from Shulman’s theory that instructors of all stripes lack the ability to synthesize content knowledge. This is referred to as the missing paradigm in education (Shulman, 1986). These include (a) subject matter content knowledge, (b) pedagogical content knowledge, and (c) curricular content knowledge. Moreover, this study attempted - via Shulman’s propositions - to demonstrate that norms in the school environment preclude developing applied curricula that is in line with the NASM standards. These include two primary areas: lack of administrative oversight and lack of pedagogical training. Finally, this literature review attempted to demonstrate that the perceived lack of administrative oversight engenders isolation and territorialism in applied instruction. Also, the perceived lack of pedagogical training contributes to fragmentation of percussion curricula and issues with achieving consensus.

The literature for this section was gathered using various internet based library databases, such as ProQuest Education Journals, ProQuest Dissertations and Theses, ERIC, Sage Education, and Google Scholar. University databases and libraries were used extensively, namely the University of Delaware and the College of Charleston. The diversity of material provided breadth and depth on subject matter concerning the aforementioned categories.

**NASM Background and Impact on Curriculum Development**

The *NASM Handbook 2009-2010* was the foundational document for this research. First, NASM personnel revise standards in consultation with various specialists, including music educators. Those revisions reflect continuing efforts to address questions of need, efficacy, and relevance (Colwell, 2006). Secondly, standards
are to be applied across the entire music curriculum in an integrative manner, but it is unnecessary to create an individual course for each standard, in this case the NASM Common Body of Knowledge and Skills (NASM, 2009). This has led some instructors to assert that the standards are not required for applied lessons. However, nowhere in the NASM standards does it state that applied music is exempt from addressing the standards. Likewise, nowhere does it say the standards are a requirement for applied lessons. This issue is up for debate since language within the handbook suggests otherwise. Additionally, the NASM Handbook further details that “evaluation, planning, and making projections are a set of connected [emphasis added] activities that relate to all [emphasis added] aspects of a music unit’s work” (p. 63). This suggests that an attempt should be made to incorporate as many elements possible in the applied lesson no matter the course of study.

It must be made clear that one of the primary aims of the NASM is to maintain flexibility and individuality of music programs. The NASM standards represent a common framework providing latitude for creative use by faculty, students, and institutions (NASM, 2009). In fact, a decentralized approach is preferable; the NASM guidelines should only serve as a framework to assist with maintaining a sense of commonality amongst programs (Hope, 2007). Moreover, institutional members of NASM are required to comply with all revisions and additions to the standards (NASM, 2009). It is incumbent upon schools of music to emphasize that the NASM Common Body of Knowledge and Skills is the basic foundation for continued growth as music professionals (NASM, 2009). To that end, the standards must be incorporated into applied curricula, but to what degree is debatable.
Although it is clear the NASM standards are a viable guide for curriculum development, there are extenuating issues which may preclude strict adherence to the guidelines and proposed framework. There are several themes in recent research that may provide insight into the challenges with meeting standards. Having adequate time to accomplish all academic tasks is a major concern. Competing interests, such as state and accreditation bodies, seem to think that there is an infinite amount of time available to accomplish current and additional requirements (Hope, 2007). This could not be any further from the truth. Secondly, NASM is not the only organization involved in the development of music curricula. In effect, bureaucratic challenges exist for both the NASM and individual schools of music (Hope, 2007). For example, requirements for music degrees, namely teacher certification programs, are based on recommendations from state and national organizations, such as National Council for Accreditation of Teacher Education (NCATE). In turn, a state may add a requirement to the curriculum which does not exist in the NASM guidelines in order to address idiosyncrasies and educational standards of a given region.

In recent years, this has been evident in the additional requirements for various subject areas. For instance, the California State College system added a one-semester critical thinking course to the curriculum, proclaiming a need for all graduates, regardless of specialization, to be critical thinkers (Colwell, 2006). Another example is that South Dakota requires students to take a course on human relations and Native American studies (Colwell, 2006). As one can see, this is specific to one’s region and becomes a core educational requirement that is generalized to all specializations within a given university.
Overlap in course requirements among accrediting and state organizations is considerable; however, there has been a compromise between competing interests in that each has agreed to accept each other’s mandates as valid (Colwell, 2006). Essentially, states and national accreditation organizations work in tandem to develop and revise curricula. NASM standards must be met for accreditation and state standards must be met for licensure in terms of music education (Essex, 2010). Thus, it may be a considerable challenge for individual schools of music to fully address requirements mandated by governmental and outside organizations.

With that being said, requirements in applied music, music education, general teacher education, and general studies often reach the 120-semester hour cap that accrediting authorities enforce. There are credit caps; however, mandates are not reduced (Colwell, 2006). In fact, many states have been placing ever greater demands on the content and depth of curricula. This can engender both external and internal conflict. Conflict arises, however, when state or federal agencies mandate change. Music faculty members are not necessarily opposed to the concept of additional instruction in specified areas, but they are frustrated with the addition of courses to an already overloaded curriculum (Essex, 2010).

This, coupled with the ever increasing requirements of NASM, has made the undergraduate music curriculum one that is totally filled and offers students little latitude in selecting their own courses during their years of study (Asmus, 2001). For example, the issue is compounded by a myriad of 1-credit classes that all music majors must take, such as performing ensembles. Some ensembles, most notably marching band, require multiple rehearsals and performances per week and leave minimal time to broaden skills
in other areas of individual interest. A perceived inflexibility in the curriculum exists. This is due to a combination of time constraints and myriad mandates (Hope, 2007). To that end, music instructors of all stripes may feel overwhelmed with developing a curriculum that addresses all of the NASM Common Body of Knowledge and Skills within a four-year time frame.

Perhaps the problem may be due in part to the inability of instructors within schools of music to properly integrate standards across courses. Boyer (as cited in Stark & Lattuca, 1997) argued the need to link learning to the lives of students, citing “it is essential to integrate the general education core that introduces students not only to essential knowledge but also to connections across the disciplines, and, in the end, to the application of knowledge to life beyond the campus” (p. 355). Nevertheless, there were struggles of connecting across disciplines [integrate] without discarding the traditional material that serves as the foundation or adding superfluous courses (Hope, 2007).

The idea of curriculum integration has come to the forefront in recent research in the field of music, specifically addressing the implementation of the NASM technology standard in the undergraduate music curriculum (Rege, 2008). It has been determined that few schools of music were able to integrate music technology skills into all music courses, including applied music studies (Rege, 2008). More specifically, a previous study on applied percussion curricula indicated that 59% of percussion instructors had little to no experience in teaching electronic percussion (technology). Moreover, out of 10 possible areas of foci, 73% of the same instructors indicated that music technology was the least important component as it relates to the current curriculum. Sixty-eight percent indicated that it was the least ideal for the curriculum in comparison to the other
areas (Fisher, 2004). In addition, some school administrators preferred to offer students a stand-alone technology course as an elective versus addressing potential avenues for integration.

However, the issue with music technology may not be due to an overloaded curriculum, but with the ability of the school of music faculty. For example, a majority of music teachers, about 75-92%, only use technology for administrative responsibilities. Less than 30% claimed that they actively plan lessons with technology objectives. A main reason for this may be due to the fact that only 25% of teachers have received technology training from their university employer (Bauer, Reese, & McAllister, 2003). You also have to question the 25% of music teachers who did receive technology training. Was it basic administrative training, such as learning how to build Microsoft Excel spreadsheets? Or, was the training more specialized, such as learning how to use music software programs? Sibelius and Finale are two of the major programs that definitely have integrative potential across music courses.

Another issue was the distribution of standards across the music curriculum. For instance, the NASM standards do not specify priorities or a hierarchy amongst the Common Body of Knowledge and Skills (Colwell, 2006). Also, the quantitative norms for curricular structure mentioned in the NASM standards were often a source of confusion, meaning the NASM does not provide definitive direction on how to distribute a specified percentage of courses or competencies across the curriculum (Hope, 2007). This was perhaps a byproduct of the NASM overly promoting institutional discretion and flexibility.
In calculating curricular structures, NASM uses a four-year degree program of 120 semester hours, or 180 quarter hours, as the basis for determining percentages of various components. The percentages indicated in these standards represent the time it normally takes to gain the breadth and depth of knowledge and skills required in a specific area of study for a specific type of degree. The percentages are benchmark indicators of time-on-task needed to acquire competencies (NASM, 2009). For example, the NASM (2009) administrators stated,

Study in the major area of performance, including ensemble participation, pedagogy courses, independent study, and recitals, should comprise 25-35% of the total program; supportive courses in music, 25-35%; general studies, 25-35%. Studies in the major area and supportive courses in music normally total at least 65% of the curriculum. (p. 89)

It is clear that the percentages are based on course load, but there is confusion to the degree that the core competencies and Common Body of Knowledge and Skills should exist in each course, including applied music. As a result, there is minimal direction on the distribution of said competencies and skills, possibly giving applied music instructors a wide degree of latitude on what standards to include in the curriculum.

Although there are issues with percentage allocation based on course load, it would be very difficult to implement exact percentages for each skill or competency for applied lessons. This is due to the fact that every student has different strengths and abilities, leading to a curriculum which is individually tailored to student needs. If percentages were implemented for specified skills, then applied curricula would clearly
border on standardization. This would inevitably thwart program individuality and personal expression, in effect, placing limits over a main tenet of the fine arts.

**Foundational Research on Applied Percussion Curricula**

Two of the foundational studies undertaken were Tercero’s (1968) *Development of a Four-Year Curriculum in Percussion Pedagogy* and Fink’s (1969) 5-part *College Percussion Curriculum Project*. The common purpose of both projects was to better understand the problems in percussion programs throughout the country and to bring together factual information from existing programs (Fink, 1969). The projects included important demographic information such as instructors’ background and education and types of degrees offered by individual institutions. In an itemized manner, the projects presented generalizations and similarities between percussion programs as well as elements that demonstrated unique differences. Although limited by descriptive statistics, this contextual approach paved the way for similar studies and presentations conducted in the 1970s and 1980s.

In 1974 Jim Petercsak picked up the mantel of examining the direction of percussion curricula. His approach utilized a balance of resources. In the article *Curriculum Highlights*, which was a transcription from a 1973 PASIC presentation, he used the 1970 Music Educators National Conference (MENC) and NASM interim reports; readings of percussion and curriculum publications; and interviews with performers, educators, and students (Petercsak, 1974). From these materials, a clearer picture on the current and future demands of students, teachers, and performers was developed. In fact, the challenge was to develop competency-based curricula that would meet individual needs as well as to encourage instructors to step outside his or her
comfort zone and experiment with curricular patterns and modes (Petercsak, 1974). Currently, patterns and modes may refer to using multicultural elements, such as Afro-Caribbean or gamelan ensembles, as a way to not only meet NASM standards but also to provide an integrative approach that crosses multiple disciplines. Furthermore, Petercsak (1974) stated, “We [percussionists] should seek to insure a commonality of goals and standards” [emphasis added] (p. 19). This may have been one of the first times a percussion instructor called for attention to minimum standards.

Ultimately, music programs will be required to demonstrate proficiency with specific knowledge and skills and those programs will be evaluated for effectiveness at every level (Petercsak, 1974). Petercsak did not directly infer that programs should devise curricula in relation to the NASM standards or guidelines from other professional organizations. However, the tenor of the presentation clearly explicated an inevitable shift toward standards and that an accrediting body would hold teachers and schools accountable.

Years later the discussion continued in the form of surveys and interviews. Steele (1988) set out to readdress the discussion that Fink (1969) and Petercsak (1974) introduced in previous years. His article "Percussion in Higher Education: A Perspective of Its Present and Future" was successful in updating demographic and trend information compiled from years past. The focus was to present a forum to discuss the challenges facing applied percussion instructors. At first sight it seemed similar to the Fink study; however, the demands of percussion students, performers, and instructors had grown drastically in the 20 years between the Fink and Steele presentations. Not so long ago, it was possible for a percussionist to have a firm grasp on the developments within their
specialty. However, percussion has grown exponentially, thereby making it more difficult for one person to maintain pace with ever-changing demands (Steele, 1988). As a result, Steele and other partners in the project, such as Dr. Douglas Walter, teamed up to ask serious questions in terms of curricular development and teacher qualifications for the future.

Steele (1988) made similar inferences as compared to Petercsak (1974). First, it is possible that there is value with including the NASM standards into the applied percussion curriculum and that due consideration should be given to establishing guidelines for applied percussion (Steele, 1988). To be clear, the NASM standards are a broad framework of specific competencies and skills. The standards do not address how to apply the competencies and skills to applied lessons. Knowing that all instruments have idiosyncrasies, it seems that Steele wanted to at least consider how the applied percussion lesson could meet the NASM standards. Although valuable insight was disseminated through a compilation of surveys from the 1960s -1980s, the percussion community did not use the information to make drastic changes to percussion education. The surveys were mere historical updates to what everyone was doing at the time (Nave, 2001).

**Percussion Dissertations and Handbooks**

Recent research on applied percussion curricula and standards-based instruction has contributed much to the improvement of percussion education throughout the years. However, content has been limited to seminar discussions at the Percussive Arts Society International Convention and National Conference on Percussion Pedagogy (Steele, 1988; CPC, 2001). In regards to formal research on percussion curricula, most studies
have been descriptive in nature and focused on the taxonomy and structure of tasks covered in the applied percussion lesson, rather than the development process.

Moreover, finding information directly related to applied percussion and the NASM standards was a challenge. This is for the fact that there were no percussion dissertations or formal research examining the influence of the NASM standards in the field of applied percussion. Although there was plenty of research which addressed the idea of applied curricula and instrumental specialties, most studies have served as historical updates, rather than an impetus for change (Nave, 2001; Paglialonga, 2010).

The 2000s witnessed a revitalized attempt at stimulating the discussion on applied percussion curricula. Much of the research was similar in technique and direction, meaning that most studies were taxonomy of program curricula (Clyde, 2001; Fisher, 2004). Clyde’s research was a comprehensive evaluation of what percussion programs in the United States and abroad included in their curriculums. In order to examine the content of curricula, he devised a survey and obtained copies of program syllabi. Moreover, he chronicled a brief history of percussion programs in the United States and abroad during the 20th century. Although Clyde acknowledged the need to evaluate curricula with respect to the NASM standards, he did not fully develop the idea or examine whether other programs actually used the NASM framework. The culminating aspect of Clyde’s research was that he devised a pragmatic percussion curriculum, focusing on current and future student needs.

On the other hand, Fisher (2004) described and interpreted the current structure of undergraduate percussion curricula implemented by percussion instructors at four-year colleges and universities accredited by NASM. Although Fisher did not use the NASM
standards to guide her study, she did discuss the importance of a curricular framework in terms of integrating content across music - a key tenet of the NASM standards. The study was designed with the intent to identify the core of percussion instruments and the progression of instruction in applied studios (Fisher, 2004). The research presented the reader with an accounting of program curricula, demographic information, and if schools treat degree specializations differently in terms of applied lessons. She set out to explain the current structure of applied percussion programs and curricula and addressed changing trends and structures of curricular design. A secondary aspect was to identify the background and education of applied percussion instructors, similar to Fink (1969) and Steele (1988).

Overall, Fisher’s (2004) research included various aspects utilized in other percussion research. The major impact on applied curricula was her interest on the instructors’ background and raising questions that called for increased professional development in order to meet current and future trends in applied instruction. Simply put, percussion curricula may not be able to grow and mature if instructors do not acquire requisite skill sets through professional development opportunities, including elements that the NASM requires or with respect to developing content knowledge as supported by Shulman’s research from the 1980s and 1990s.

Perceived problems associated with professional development are not limited to applied music. In fact, research has demonstrated that every field of study has issues with creating pedagogical training and planning opportunities as well as engendering productive discussions throughout the teacher corps (Stark & Lattuca, 1997). Therefore, it is incumbent upon music educators to examine how fields beyond music address the
issue of improving professional development and collaborate on creating an atmosphere which encourages and provides opportunities for all teachers.

Nave’s (2001) *A Survey of Percussion Studio Curricula in the State Universities of the United States and Puerto Rico* discussed the rationale between three different pedagogical approaches in applied percussion curricula. These include (a) totalization, (b) specialization, and (c) middle ground. Totalization refers to an instructional approach that places an equal emphasis on the core instruments of percussion-snare drum, timpani, mallet instruments, auxiliary instruments (cymbals, tambourine, bass drum, etc.), and drum set (Nave, 2001). Specialization in percussion education may be defined as an approach that emphasizes one instrument as the student's main instrument. Middle ground is a term used to refer to the approach of percussion instructors who combine facets of totalization and specialization. In the middle ground curriculum, Nave (2001) stated, “the student may emphasize one instrument in private study, as in the specialization approach, while continuing to learn techniques, styles and repertoire on the other percussion instruments that are emphasized in a totalization approach” (p. 5).

Nave (2001) differed in that she set out to create discourse on the appropriate type of percussion curriculum whereas Clyde (2001) set out to devise a curriculum based on his research findings. Moreover, Nave used a mixed methods approach, including interviews and a survey. She interviewed highly regarded members of the percussion community, but she only conducted three formal 30-minute telephone interviews. Nave did not discuss why she only conducted three interviews. It not only demonstrated a lack of commitment to the proposed design but also to the relevance of the qualitative intent of the study. Thus, there was an imbalance in the design structure.
Additionally, Nave (2001) presented a litany of quotes and opinions for a preferred focus (specialization, totalization, and middle ground) from both the survey and panel discussions from the Percussive Arts Society International Convention. The comments, though taken from a diverse group, solely discussed the reasons for rejecting or supporting each approach. To that end, the research may have benefited from a discussion on the thought process on how to develop curricula of a particular focus, rather than a mere discussion on preferred foci.

A common element was that previous percussion studies only used descriptive statistics (Clyde, 2001; Fisher, 2004; Nave, 2001). No attempt was made to advance the discussion via inferential statistics. As a result, their research lacked a compare and contrast aspect. For the most part, the research seemed to focus on accounting for individual elements in percussion programs, rather than focusing on the purpose of or decision making involved in the development of curricula.

Although there was a lack of statistical analyses, previous percussion studies were designed to be works-in-progress, recognizing a need to continue research (Clyde, 2001; Fisher, 2004). Clyde implied that the main purpose of his research was to generate discussion on percussion pedagogy. Fisher was of similar mind but added that further investigation could assist in achieving consistency and developing a comprehensive model that could be tailored to individual programs.

Additionally, there have also been numerous attempts to codify curricula for individual percussion instruments, targeting specialized elements within percussion education rather than addressing the state of percussion education as whole. For example, there are many well written studies on drum set curricula, such as Morgan’s
(1993) *A Basic Drum Set Course of Study for the Undergraduate Percussion Major* and Martin’s (1994) *A Comprehensive Curriculum for the Drum Set in the College Percussion Studio.* In fact, Morgan’s approach was similar to Clyde (2001) in that the purpose was to determine objectives and develop a curriculum that would enable a student to meet those prescribed objectives (Morgan, 1993).

Morgan (1993) provided an organized structure for drum set curricula. His focus was to address requisite drum set skills which served as the foundation for success in the performance arena. Most notably, Morgan reviewed the lineage of percussion methods and accounted for the majority of methods in use today. This review assisted him in devising curricula that addressed student’s needs through listening, multimedia, and diversity of musical styles. Although Morgan did not propose how drum set should be integrated into the broad percussion curriculum, his approach offered the teacher flexibility to meet students’ needs. Moreover, there was an undertone of addressing standards in the curriculum, such as recognizing the need to incorporate technology, multicultural elements, and develop a thorough understanding of repertory and pedagogy. All are part of the NASM Common Body of Knowledge and Skills.

Overall, research studies on applied percussion curricula were informative and had a distinct focus on performance, but lacked discussion on how to implement and account for the NASM standards, specifically technology, history, writing, and other skills that increase a student’s marketability. The resultant products lacked an integrative and macro-curricular approach which addressed concerns beyond content and focus. All were missing inferential statistical analyses, inhibiting a deeper understanding of the subject matter. Simply put, applied percussion is inherently integrative and crosses
multiple disciplines. Therefore, it is important to ensure curricula-based research accounts for how the product fits into the entire curriculum and if it will jeopardize other essential components.

Furthermore, Fisher (2004) and Nave (2001) could have used the NASM standards to support their assertions. It is unknown why they did not acknowledge the need to account for the role of the NASM standards in developing applied curricula. Since there was little research completed on the NASM standards at the time of their research, it was possible that they did not feel it was relevant. In turn, this area of research is incomplete and requires further examination. Moreover, the NASM is the main accreditation body for 625 schools of music. To that end, it is of utmost importance to ensure that schools of music are meeting the standards set forth in the annual handbook.

**Impact of Professional Organizations**

External entities, such as state and national accrediting bodies and publishers wield great influence over curriculum planning and development (Stark & Lattuca, 1997). In turn, numerous musical organizations affect the way schools of music create and implement the curriculum. The Percussive Arts Society (PAS) and the National Conference on Percussion Pedagogy (NCPP) are two of the premier outlets for advancing the discussion on applied curricula and standards-based education. As stated previously, PAS each year holds the Percussive Arts Society International Convention (PASIC). The aforementioned research presented at PASIC by Fink (1969), Petercsak (1974), and Steele (1988) has been integral to the furtherance of applied percussion curricula. To this
day, there are presentations on percussion pedagogy and curricula, mainly supported by the College Pedagogy Committee.

In 1996 the pedagogy committee members’ focus was to establish standards for the college percussion methods class and possibly address the area of applied percussion later (Hillbrick, 1999). This was the first documented attempt to codify percussion standards in accordance to the NASM standards. The efforts of Cook, Combs, Rogers, Siwe, and many others drove the project (CPC, 1997). The idea of establishing standards was a work in progress which partially developed out of Steele’s (1988) research, but formal announcement toward establishing standards occurred in 1992.

In 1997, the CPC adopted a set of standards. Combs (as cited in CPC, 1997) stated, “It was only after considerable exchange of ideas, many phone calls, faxes, emails, and full consideration of all past efforts in this area was the draft of standards developed” (p. 44). Subsequently, the CPC sent the standards to the NASM for approval. However, it is unclear what became of the standards at the NASM level. To understand this better, a follow-up session should be conducted with the authors of the percussion methods standards document along with NASM personnel. Regardless of NASM’s position, it was clear that PAS membership wanted applied percussion methods classes to follow these guidelines. It is unknown to what extent the guidelines influenced percussion methods development or if undergraduate programs even know of or followed through with the suggested guidelines. Nonetheless, the discussion and development of NASM inspired guidelines was precedence for addressing applied percussion curricula via the NASM standards.
The discussion resurfaced at the 2001 Percussive Arts Society International Convention (PASIC) during the CPC panel discussion: *Influences on Revising Percussion Curricula for the Undergraduate*. It contained a segment dedicated to the role of NASM standards and applied curricula. Specifically, Dr. Jeff Moore, Director of Percussion Studies at the University of Central Florida (at the time), presented revisions to his applied curriculum based on the NASM Common Body of Knowledge and Skills.

It has been shown that each facet of the percussion curriculum can be aligned with the NASM Common Body of Knowledge and Skills (Moore, 2001). For example, under the history and repertory skill, he required students to create listening card annotations. These cards must include composer, title, record title and label, performer general content, brief discussion of personal impressions and thoughts regarding the work or performance, and anything that would aid in later recall of the recording (Moore, 2001). In turn, the student would know of the works they perform and not just the performance aspect. An argument could be made that this exercise would also meet the intent of another NASM skill: musicianship skills and analysis. This is because a discussion on musical form or harmony falls into the NASM description of analysis. As a result, it is possible to address multiple skills with one well-crafted exercise. Although Moore asserted that music history courses address this competency, he may have realized that percussion students get very little percussion history and repertory analysis in the core curriculum music history courses. This was a way to fill the gap of pertinent information that percussionists should possess in order to adequately teach future students but to also speak intelligibly about the art of percussion.
To this day, the University of Central Florida percussion curriculum continues to be representative of the NASM standards and is adjusted based on changing needs of students as well as revisions made by the NASM. Although Moore’s dedication to standards has not proliferated overtly across percussion programs, it established a precedent supporting a defined structure in applied percussion curricula. In essence, Moore supported Hope’s (2007) call for preparing students for the world in which they will teach and perform. Nonetheless, support for percussion curricula is not limited to the Percussive Arts Society.

In 2000 the National Conference on Percussion Pedagogy was developed. Essentially, the NCPP developed out of a need to address issues confronting percussionists - administrators, instructors, and students alike - within all education levels and specializations. Specifically, the conference provided opportunities to discuss pedagogical trends and strategies for developing and implementing effective curricula. Moreover, the conference served as an update to what transpired in the world of percussion (Harris, 2000). This was achieved by dedicating a portion of the conference to recent research in percussion. In fact, the aforementioned research by Fisher was presented at the conference in 2004. Furthermore, the NCPP is unaffiliated with PAS; however, many attendees are members of PAS or other educational organizations.

NCPP’s influence, though smaller than PAS, is growing in the area of curricula and pedagogy. Specifically, in 2003, members drafted the *National Standards for Percussion Facilities and Equipment*. The standards serve as a primary source in upgrading programs; assist in determining the scope of individual programs; and fulfilling an institution’s educational mission (NCPP, 2006). Franklin et al. (2009) stated,
“With the advent of the percussion ensemble and a more modern approach to percussion playing came the need for larger percussion inventories that included multiple instruments of all types” (p. 1). The document presents an itemized list of instruments and space requirements, much of which has been an area of concern in terms of meeting the demands of current applied curricula. For instance, there is a need for items such as a school drum set, better practice room facilities, and recording and playback equipment (Morgan, 1993). All of which may inhibit the potential to meet the technology aspect of the NASM Common Body of Knowledge and Skills.

The document was the first of its kind and presents a logical accounting of percussionists’ needs. It clearly stated that these are minimum standards and that exceptional programs will go beyond the recommendations. It is important not just for the trend toward standards, but also because it will assist teachers with acquiring requisite elements for their program. If a program does not acquire the minimum equipment, it may not be possible for the school to meet the standards set forth by the NASM. At a minimum, it may serve as an advocacy document and leverage tool for applied instructors.

To that end, the NCPP and PAS are examples of organizations which have directly espoused some form of national standards in certain areas of percussion. This is important since most members of the organizations teach at NASM affiliated schools. At a minimum, individual instructors are part of the overall peer review process of NASM standards, making it possible for changes to and/or implementation of the standards (Hope, 2007). It is unclear whether the organizations accept the notion of adopting the
NASM standards as the basis for applied percussion programs, but it is clear that there is an open forum to increase discussion on curricula and pedagogy.

**Applied Music Research Other Than Percussion**

More recently, there have notable research studies that focused on the importance of the NASM standards in music, though in areas outside of applied percussion. Much of the recent research on the NASM standards has been attributed to the need to prepare students for future employment (Essex, 2010; Johnson, 2010; Paglialonga, 2010; Rege, 2008; Ruch, 2009). Although there was a lack of research in this area previously, the aforementioned researchers used that as a platform to examine the influence of the NASM standards in the development of applied vocal, music theory, music technology, and music education curricula. Two common themes exist within the literature: Relying too heavily on tradition and not meeting the NASM standards.

Each author noted that schools of music rely heavily on tradition. In fact, there has been little curricular change in courses over the last 100 years (Essex, 2010; Paglialonga, 2010). Also, there have been very few changes to the NASM standards since 1953; the only major change is that the standards are more descriptive now (Essex, 2010). Moreover, collegiate music programs are entrenched in the European conservatory based system of the 1800s, focusing more on mastering performance (content) versus teaching skills (pedagogical) (Ruch, 2009). In turn, these beliefs are often deeply seated and traditional, possibly precluding students from obtaining requisite skills to succeed (Essex, 2010). Essentially, relying on tradition creates a dialectical standoff, meaning that a tension exists between performance based competencies of the
conservatory versus the pedagogical aspects of training to become a teacher (Essex, 2010).

As students cross into the pedagogical aspects of music, a tension is experienced for the first time between performer and musician (Essex, 2010). Essex (2010) stated, “Make no mistake; music teacher education is proficient at preparing music teachers to train traditional musicians. But not every student wants to be a musician who is trained in the traditions of western art music” (p. 145). Although this quote does not focus on applied music, it is relevant since all music education majors are required to take applied lessons. In turn, a teacher who emphasizes a singular approach in teaching applied music will undoubtedly be limiting students’ potential. Thus, this lack of change and imbalance may inhibit meeting the needs of both performer and teacher in the 21st century (Paglialonga, 2010).

Not meeting the NASM standards is another common theme, regardless the degree type, specialization, or size and category of a school of music (Paglialonga, 2010). Research demonstrated a variety of reasons why standards were not being met. Similar to Hope (2007), there is the misconception that there is an infinite amount of time, resources, and staff to implement the standards fully (Renfro, 2004). This is in line with the intent of research question number four of this study: to what extent do percussion instructors perceive that external factors such as administrators, colleagues, professional organizations, and professional development influence the development of the undergraduate percussion curricula in accordance with the NASM Common Body of Knowledge and Skills? Simply put, a lack of access to resources could pose potential problems for schools of music.
Additionally, the concern over external factors was a focal point for several percussion convention seminars (Franklin et al., 2009). Specifically, the 2009 NCPP offered a seminar on budget practices and allocation of resources, thereby acknowledging that not all percussion programs have similar access and support. One major challenge was that percussionists face greater funding challenges as compared to other applied studios merely because of the diverse instrumentation in applied percussion (Franklin et al., 2009).

Furthermore, the complicated nature of meeting both the NASM and state standards has created a system that lacks a reformatory approach, maybe even a system which does not fully attempt to meet every mandated standard (Colwell, 2006; Johnson, 2010). Essentially, the current system does not engender connections among disparate parts, meaning that an integrative approach to education is minimally present. Many music programs have so many separate requirements that depth of study and professional focus may not be achievable (Campbell, 2007). In effect, schools of music are failing to integrate seemingly connected components, such as music theory and technology. Students are spread too thin while attempting to meet standards from multiple systems - NASM standards and state mandates. Additionally, the 120-credit hour degree inhibits the student from fully developing both requisite instructional and performance skill sets (Colwell, 2006; Johnson, 2010).

Another similar issue in collegiate music programs is that research indicated an inability to meet standards in music theory (Johnson, 2010). Specifically, one study documented that music theory curricula at Texas universities were not in compliance with the standards and mandates of not only the National Association of Schools of Music, but
also the Texas State Board for Educator Certification, and the Texas Essential Knowledge and Skills standards (Johnson, 2010). In this study, music theory faculty members did not consider some competencies to be priorities, namely both melodic and rhythmic improvisation. This was further illustrated by the fact that mandated content and skills, multicultural elements, and pedagogical competencies in music education and theory were either ignored or not fully integrated into the undergraduate music curriculum (Johnson, 2010). On the contrary, research in applied voice demonstrated that teachers of all stripes concurred somewhat equally that the NASM standards were vital and that they were implemented into the curriculum (Ruch, 2009). However, the degree to which the standards were being met may not be equal to the degree of concurrence (Ruch, 2009). Thus, there is an inconsistency on the value that teachers place on the NASM standards.

It is interesting that similar themes, when compared to music theory, appear when analyzing whether music programs meet the NASM technology standard and if teachers have the capability to incorporate it into the curriculum (Rege, 2008). Deal and Taylor (as cited in Rege, 2008) stated, “There appeared to be little consensus as to the content of this training (technology) and exactly how it should be incorporated into the music curriculum” (p. 17). In fact, research demonstrated that undergraduate performance majors are not given the opportunities to learn requisite music technology skills that they will need to function effectively as working musicians once they graduate (Rege, 2008). Additionally, there appears to be minimal faculty involvement with incorporating technology into the applied curriculum (Gaunt, 2007; Parkes, 2008). Gaunt’s study mentioned that only five of twenty teachers had an interest in teaching with technology
and added that zero out of twenty teachers indicated that they used school audio and video recording equipment as part of their teaching practice in the collegiate setting. To that end, it is imperative to support an integrative approach across the entire music curriculum, including applied lessons (Rege, 2008). The inclusion of technological aspects in the curriculum is one of NASM’s primary Common Body of Knowledge and Skills. Thus, music instructors shall add this component in order to be in compliance with the NASM language.

In terms of applied music, it is necessary to ascertain whether technology is underrepresented in the applied percussion curriculum. As compared to other areas of applied music, percussion instructors have been at the frontier of integrating technology into the curriculum. For instance, the field of percussion has experienced a vast expansion into modern and electronic music by using instruments and software for sampling and sequencing, such as a MalletKAT. A MalletKAT is an electronic version of a mallet instrument which incorporates Musical Instrument Digital Interface (MIDI) and many sound files, including the vibraphone, xylophone, and marimba (Fambrough, 2006; Schutz, 2005). Most importantly, the establishment of electronic percussion ensembles at various schools of music throughout the United States, such as the University of Arizona and the University of Alabama-Birmingham, tacitly acknowledges the possibility of accomplishing multiple NASM competencies and skills through the ensemble setting. These include improving students’ knowledge on the implementation of technology; expanding breadth of repertory; and improving compositional, improvisational, and arranging skills.
In essence, Fambrough (2006) and Schutz (2005) aspired, knowingly or unknowingly, to integrate various components of the music curriculum into percussion study. Thus, they submitted to the integrative tenet that is advocated by the NASM, specifically synthesis. Nonetheless, not all programs use technological components as espoused by Fambrough and Schutz. This may be due to funding issues as proposed by Franklin et al. (2009) but also the fact that there may be a deep seated sentiment to remain with the status quo and focus on traditional repertoire and techniques (Rege, 2008).

On a similar note, Ruch’s (2009) *Faculty Members’ Perceptions of the Essential Educational Experience for Undergraduate Voice Performers* research expanded the basis for researching the influence of the NASM standards on applied music curricula. She examined the extent to which the NASM educational experiences existed in current undergraduate voice curriculums as compared to this study’s focus on the NASM Common Body of Knowledge and Skills. In fact, this was the only research that focused on the direct relationship between the NASM standards and applied lessons. Although the dissertation focused on vocal performance, the premise of the research is equally applicable to applied percussion. Furthermore, the author set out to discover whether instructors were aware of the NASM standards and if they utilized other arts based standards to devise a curriculum. Additionally, Ruch’s research demonstrated acceptance of the NASM standards across the vocal community and instructors perceived the existence of the standards in the curriculum. However, her findings - similar to Johnson (2010) and Rege (2008) - suggested that not all the standards were being met.
Of equal importance to the research was the fact that Ruch (2009) did not solely base her research on the NASM standards. She was able to justify the standards based approach by comparing the broad nature of the NASM standards to the intricacies of other scholarly based research, such as Stark and Lattuca’s (1997) *Shaping the College Curriculum: Academic Plans in Action*. Although Stark and Lattuca’s research was not focused on music education, their ideas were not limited to one specialization. For instance, widespread troubles with implementing standards across myriad specializations have been troublesome. To that end, to limit the research process to only music education sources could prove detrimental, especially in this era of promoting integrative education.

One major benefit of the aforementioned research in this section as compared to research on percussion curricula is that Essex (2010), Johnson (2010), Paglia Longa (2010), Rege (2008), and Ruch (2009) furthered the analytical aspect of research on collegiate music programs. These dissertations utilized advanced sampling procedures, such as stratified sampling. Moreover, they were able to make conclusions based on inferential statistics. Using inferential statistics enabled them to not only go beyond basic content and structure of curricula, but to also describe influences of curricula in relation to theoretical frameworks. Moreover, they went beyond the notion of taxonomy of content and justifying the work by claiming the most significant purpose was to provide the community an historical update. Their research centered on understanding and presenting the how and why curricula are devised.
Peripheral Issues

Although a precedent exists for establishing curricula in accordance with the NASM, several peripheral issues may provide further explanation on the perceived reluctance to adopt the standards. From a theoretical perspective, the field of education struggles to meet the needs of students and fails to prepare them for the future (Shulman, 1987). The overarching reason for this was the lack of content knowledge. The lack of content knowledge was attributable to norms within the educational environment. This section delineated how norms across applied music have potentially inhibited the development of content knowledge as related to applied curricula. For instance, this research proposed that the lack of both administrative oversight and professional development opportunities have perpetuated norms in applied music. Ingrained norms such as isolation, territorialism, fragmentation, or a lack of consensus are major factors in developing applied curricula (Fredrickson, 2007; Johnson, 2010; Parkes, 2009).

However, there are counter arguments that should not be discounted, such as threats from perceived and actual standardization and overzealous interpretation of the NASM language.

Historically, there has been a distinction made between different kinds of teacher knowledge (Shulman, 2004; Wexler, 2009). Shulman’s research in the 1980s focused on the diverse nature of content knowledge. There are three different domains of content knowledge: (a) subject matter content knowledge, (b) pedagogical content knowledge, and (c) curricular content knowledge (Shulman, 1987). Subject matter refers “to the amount and organization of knowledge per se in the mind of the teacher” (Shulman,
2004, p. 201). Pedagogical knowledge refers to one’s ability or knowhow of teaching or conveying material (Wexler, 2009).

In the context of this study, the pedagogical element is missing in music education programs (Paglialonga, 2010). From a percussion standpoint, instructors are unable to synthesize performance and pedagogical aspects into percussion methods courses (Burdett, 2007). Burdett (2007) stated,

Those teaching and supervising the methods course need to have more experience with students in the public school environment…direct input from teachers alluded to the fact that many of those involved in the instruction of the methods course are working strictly in higher education, and have either been out of public school teaching for a number of years or have never taught in that environment and are unaware of the current realities of the teaching situation. (p. 40)

Although Burdett studied the influence of pedagogy in the percussion methods course as related to the music education major, it is not unrealistic to assume that similar issues exist in the applied percussion lesson.

As a reminder, applied percussion students generally do not enroll in percussion methods courses. It is generally reserved for music education students whose primary instrument is not percussion. Nonetheless, a failure to disseminate proper pedagogical techniques only perpetuates the problem. This is important because music education majors who are percussionists may not be given the pedagogical tools to instruct effectively on their primary instrument.

Curricular knowledge refers to the organizational structure and sequence of materials and how they fit into the greater whole (Shulman, 1986). Also, it refers to
one’s ability to relate content across courses and lessons simultaneously. However, it is apparent that subject knowledge and pedagogy were treated exclusively rather than integrating aspects of the two knowledge bases, possibly creating an inflexible preparatory system that does not synthesize teaching skills (Shulman, 1987). Similar to Shulman’s broad assessment, it has been confirmed that subject matter and pedagogical content knowledge and skills were at times missing in the field of music and classroom setting (Burton & Gerber, 2007; Moore & Sampson, 2008; Paglialonga, 2010). With that being said, aspects of content knowledge must work in tandem and be directly applicable to the particular music specialization in order to achieve a modicum of progress.

Combining the three forms of teacher knowledge would present a synergy that propels education forward (Hofer & Swan, 2009). This interweaving of content knowledge is often referred to as the missing paradigm in education (Shulman, 1986).

Recent research in applied music has used Shulman’s (1986) theory, including definitions of principles, maxims, and norms as means to investigate instructor’s pedagogical content knowledge (Wexler, 2009). Principles refer to views that are derived from empirical research, something demonstrated via scholarly study. In this theoretical context, principles may be explicit rules, based on research, that teachers feel are central to successful teaching (Wexler, 2009; Kennell, 1997). Maxims do not make theoretical, but practical claims that have never been confirmed by research (Shulman, 1987). Norms refer to the values, goals, and attitudes held in a given culture or environment (Shulman, 1986; Wexler, 2009).

This study, like Wexler’s (2009), focused on the extent the aforementioned norms in teaching influence pedagogical content knowledge, while also investigating curricular
content knowledge. More specifically, the intent was to determine how norms in the percussion community influenced the use of the NASM standards in developing applied percussion curricula. This was in line with purpose of this study: to determine if the NASM standards influence the development of undergraduate applied percussion curricula. Finally, Wexler investigated whether teachers of different instrumental groups shared attitudes and goals whereas this study focused wholly on percussion instructors.

There is evidence to suggest that college studio teachers [applied music] share many attitudes and a common pool of strategies and goals (Wexler, 2009). Structural traditions of schools of music and higher education seep into college faculty, causing them to uphold the very same structures many call to be changed (Essex, 2010). Thompson (as cited in Essex, 2010) explained that “all new experiences are filtered through previously held belief systems, leading to replication of past or known practice rather than exploration of new possibilities” (p. 146). Thus, instructors may possibly accept a system which does not engender individual inquiry and praxis, namely refocusing efforts to meet the mandates of the present and future. As a result, the circularity of music education persists, minimizing instructors’ ability to be transformers in education and further entrenching the behavior of acting as gatekeepers of institutional norms and values (Essex, 2010).

Previous research provided evidence supporting that applied music teachers do not differ much in attitudes, strategies, and goals (Wexler, 2009). Studies on string education or vocal performance noted no statistically significant or minimally significant differences among string or vocal faculty regardless of years of teaching (Lesniak, 2008; Ruch, 2009). Other studies suggested commonality and no significant difference even
when including all instrumental areas (Wexler, 2009). In total, a common element in previous research was applied instructors tend to resist change or challenge the status quo that has been established by the long tradition of instrumental and vocal instruction (Burdett, 2007; Colwell, 1991; Gaunt, 2007). Thus, this suggests there is a cultural norm that strongly influences a majority of instructors in applied music.

The lack of administrative oversight and professional development opportunities may perpetuate norms, precluding the development of curricula that meets standards and acceptance of the status quo. The status quo has possibly engendered a degree of isolation, territorialism, fragmentation of curricula, and lack of consensus. In fact, the closed door setting supporting the teacher-student dyad makes it difficult to formally investigate and adequately address the aforementioned issues that seem to be perpetuated by the secretive nature of applied music (Parkes, 2009). Furthermore, the secretive environment is advanced when administrators in part look the other way and permit instructors to conduct daily business without supervision or oversight on matters affecting the curriculum and student development (Stark & Lattuca, 1997). Moreover, diversity of settings and people makes it difficult to create a simple framework with wide applicability (Stark & Lattuca, 1997).

Although these opinions do not represent an entire music faculty, it is likely that percussion instructors are represented in the population. This then leads one to question whether school administrators direct applied instructors to comply with the NASM standards. While music standards have been discussed at length, their implementation has been less than complete, isolated, and temporary (Essex, 2010). In fact, systemic change has not taken place and traditional structures remain in place (Essex, 2010). In
turn, the broader issue may be with administrative leadership and how they possibly exacerbate norms in applied music.

Isolation and territorial tendencies may contribute to the lack of explicit integration of the NASM standards. Isolation is based on long standing practices; the arts tend to be relatively constant and internal (Stark & Lattuca, 1997). Wexler (2009) stated, The studio (applied music) community doesn't generally communicate much among colleagues. Communication among studio teachers on teaching issues is generally nonexistent…The studio has traditionally been a private, hidden locale; almost akin to a religious sanctuary, certainly outside the bounds of rational scientific inquiry. (p. xi)

Furthermore, research demonstrated that curriculum planning is an individual task with almost two-thirds of instructors claiming that it is informal in nature and that they are given autonomy to develop materials for the curriculum (Stark & Lattuca, 1997). To make matters a little unsettling, an inevitable consequence of isolation is instructors may become fearful to discuss their work, and concerned that they would be exposed as bad practitioners (Schwartz & Webb, 1993). Thus, there is an implied lack of direction and minimal supervision.

In addition, 90% of survey respondents (24 schools of music administrators) asserted that applied music curricular decisions are primarily made by applied faculty (Rege, 2008). In turn, it is necessary to ponder the possible effects of minimal supervision. In some instances teachers lack a support network, have negligible mechanisms in place to deal with issues that may arise in the applied music setting, and have little engagement with the curriculum outside of applied music (Gaunt, 2007).
Similarly, Wiggins’ (as cited in Johnson, 2010) research claimed that the current collegiate music system is “a curriculum that lives in silos void of creating greater connection among disparate parts” (p. 77). Additionally, curricula were developed and taught in isolation from accreditation requirements, legal mandates, and without regard to students’ needs (Johnson, 2010).

On the other hand, professional development opportunities from a pedagogical perspective seem to be in short order, meaning teachers of all stripes lack pedagogical opportunities (Shulman, 2005; Stark & Lattuca, 1997). Since faculty members in higher education rarely receive direct preparation to teach, they most often model their own teaching after that which they themselves received (Shulman, 2005). The same was true for applied music teachers (Fredrickson, 2007; Gaunt, 2007; Wexler, 2009). In fact, this stems from the lack of training in basic theory of instruction and education in the formative years. In turn, instructors tend to rely fully on their experience and instincts rather than specific teaching methodologies (Abeles, Goffi, & Levaussuer, 1992; Stark & Lattuca, 1997; Wexler, 2009).

As a result, research has shown that undergraduate and graduate music students of all degree types not only lack pedagogical training, they also receive minimal training at developing curricula and spend little time learning how to teach private lessons when compared to curriculum requirements for music education or performance (Fredrickson, 2007). Although there was no proof that this stems directly from an applied instructor’s capabilities, it does lead one to question whether professional development opportunities are available for the applied music faculty. Professional opportunities do exist, but are generally limited to performance aspects of applied music versus issues concerning
teaching and learning in the one-on-one setting (Essex, 2010). In turn, there is an imbalance between performance-based and pedagogical-based tasks in the undergraduate music curriculum (Roberts, 2008; Essex, 2010). Thus, greater emphasis is often placed on becoming a performer versus a teacher and performer. To that end, a lack of professional development may lead to fragmentation of applied curricula and a lack of consensus amongst applied instructors.

Fragmentation may also play a role in the perceived reluctance of adopting the NASM standards in applied music. Stark and Lattuca (1997) stated, “The modern system of specialization and the separatism (isolation) it has fostered have been sharply criticized for fragmenting teaching and learning in colleges and universities” (p.143). A research study that involved a large sample of academic vice presidents, presidents, department chairpersons, and faculty members in community colleges and state colleges revealed that between “15% and 37% of respondents said there was never or seldom a systematic plan for program development” (Stark & Lattuca, 1997, p. 125). Heim (as cited in McClaren, 1990) stated, “We [percussionists] are not in our infancy as performers, but we are as educators. Our approach is splintered” (p. 29). Fragmentation may be related to an undefined picture of the very best of instructional practice for applied instructors (Fredrickson, 2007). In turn, research demonstrated that fragmentation exists, but to what degree in unknown.

In the field of percussion, it has been intimated that students were cheated when a clear guide of expectations was unavailable and scattered (Cramer, 1972). This could create a situation which precludes students from knowing how they would achieve expectations. In order to better prepare students, instructors must be open-minded
(Cramer, 1972). Essentially, not one approach can serve as a panacea for all issues - pedagogical and performance - confronting percussion education (Cramer, 1972). There is a palpable need to work together in order to ensure that students receive a balance of perspectives and that there are more than one means to an end (Paglialonga, 2010). However, the process must be logically organized, meaning there is a fine line between open-mindedness and individually tailoring lessons versus providing students a fragmented approach.

Often this requires teachers to step outside of their comfort zone or established norms. Teachers need to become comfortable with the unfamiliar and assimilate new processes in order to improve instructional practices and facilitate students’ growth and development (Boardman, 1992; Essex, 2010). In other words, percussion instructors must expand and refine teaching techniques and strategies. To that end, since there currently is no commonly recognized curriculum or method used in the studio context, we must continue to ask basic questions of the best way to prepare future applied music teachers (Duke & Simmons, 2006).

As for a lack of consensus, instructors and school administrators were found to have very little agreement on music competencies (Paglialonga, 2010). This is due in part to a system which condones a scattered (fragmented) process in terms of evaluation and planning (Parkes, 2009). In effect, there is a lack of synergy in terms of combining the three domains of content knowledge. Thus, this suggests an acceptance of a system which ignores what Shulman (1986) referred to as the missing paradigm.

Research suggested several ways to minimize fragmentation and a lack of consensus. First, it is incumbent upon schools of music to provide meaningful
professional development opportunities to applied instructors, even if funding is limited (NASM, 2009). Hence, it is possible that professional development opportunities are not proportionately available across applied music and specializations.

Secondly, teachers must acquire an improved understanding of common characteristics and successful strategies that strengthen the teacher training process so that in addition to their skills as performers, studio teachers may also be prepared to be an accomplished educator (Wexler, 2009). Nonetheless, musicians are attuned to their natural will, which in part has been to maintain the status quo of a music education system that has been in place for generations (Essex, 2010). As a result, it is possible that teachers default to norms while, knowingly or unknowingly, forgoing other requisite skills for the current workplace environment. In other words, if one has only experienced the applied setting from the role of student, one cannot be expected to move to the role of teacher. In order to develop future applied teachers, introducing a formal process for music performance majors to acquire teaching skills must be undertaken (Fredrickson, 2007). No matter the specialization, music students should be introduced to experiential learning processes which enable pedagogical development.

Another peripheral issue is that standards-based curricula builds walls, defeats individuality, and does not meet the needs of all students. Music is inherently personal and individualized (Willet, 1972). Willet (1972) stated, “It is this fact that makes the artist, the musician, and the writer, concern himself with individual expression and accounts for a lack of interest in a curricular system that requires everyone to reach the same specific measurable goal” (p. 72). In fact, some educators believe that standards are provincial in nature and have the potential to undermine efforts to create multicultural
curricula and pedagogies (Sleeter, 2002; Essex, 2010). A predetermined and dogmatic curriculum is contradictory to the intent of meeting individual needs (Beck, 1978). Similarly, standards should not be misinterpreted to mean standardizing the educational experience for all students. Standards should be used to personalize education and facilitate growth and potential for success (Gupton, 2003). However, there is a need to articulate a plan of action which would serve as a point of reference for each student throughout his or her four years in the applied percussion program (Beck, 1978; Willet, 1972). Kennell (2002) stated, “Task appropriateness and instructional technique, therefore, may be dependent on the student’s developmental stage” (p. 249). To that end, the issue is not with the existence of a structured curriculum rather it is with the relevance of a standardized one.

Nonetheless, it is necessary to clarify the difference between standards versus standardization. Standardization implies each program doing the same thing, using the same materials, and doing so on a strictly adhered timeline. That is a definite threat to program integrity and individuality. However, standards, as implied by the NASM, are merely a framework. Schools of music are encouraged to experiment with curriculum design and creative means to meet standards (Hope, 2007). The NASM standards represent a common framework providing latitude for creative use by faculty, students, and institutions (NASM, 2009). NASM does not impose an arbitrary taxonomy of activities and timelines for applied music. They clearly articulate that materials used within a course of study are at the discretion of the school and instructor as long as the intent of the standards is met (NASM, 2009).
Summary

This section presented literature that was in line with the purpose of the proposed research. The purpose of this quantitative research study was to determine if the NASM standards influenced the development of undergraduate applied percussion curricula. Additional purposes were to determine if barriers and external factors affect the implementation of standards, and if barriers, external factors, and/or the essential nature of standards were associated with the existence of the NASM standards in current applied percussion curricula. The literature review encompassed many areas of percussion, music education, and general education. It included research from 1968 to the present. The literature review was separated into seven categories. These included (a) NASM background and impact on curriculum development, (b) foundational research on applied percussion curricula, (c) percussion dissertations and handbooks, (d) impact of professional organizations, (e) applied music research other than percussion, and (f) peripheral issues.

The final category included how the perceived lack of content knowledge leads to norms in education which possibly affect the development of applied curricula. Shulman (1986, 1987, 2004, & 2005) supported the notion that teachers must master not only content knowledge in order to succeed, but also possess the ability to create synergy. Content knowledge includes subject matter, pedagogical, and curricular knowledge. Recent research suggested that applied music instructors lack pedagogical and curricular knowledge. Specifically, this may be attributable to a lack of administrative oversight and professional development opportunities, thereby enabling the perception of isolation, territorialism, fragmentation, and a lack of consensus in applied music.
Research clearly demonstrated that there were numerous factors which influenced curriculum development. Whether or not established norms or lack of content knowledge, as proposed by Shulman, influenced curriculum development, this study was necessary to determine such factors but to also propel the investigation of standards-based education to the forefront of applied music.

To that end, this section presented in detail several variables which may provide a vector on the influence of the NASM standards in developing applied percussion curricula. This study investigated four dependent variables based on respondents’ perceptions and three independent variables based on demographic categories (Years of Teaching, Level of Education, and Teaching Contract). Dependent variables, based on descriptive statistics, included the extent to which respondents agreed (perceptions) that the NASM standards were essential for the undergraduate curriculum; the extent to which respondents agreed (perceptions) that NASM standards existed in the undergraduate curriculum; the extent to which respondents agreed (perceptions) that there were barriers to curriculum development; and the extent to which respondents agreed (perceptions) that external factors influenced curriculum development. Additionally, the study investigated differences in median agreement (perceptions) according to demographic variables (independent). For this study, instructors’ perceptions of barriers to student development were equipment, facilities, and finances. External factors included instructors’ perceptions of administrators, colleagues, professional organizations, and professional development opportunities.

However, the secretive nature of applied music has precluded meaningful investigative research (Bergee, 2003; Kennell, 2002; Parkes, 2009). To date, this was the
first attempt to study the influence of the NASM in applied percussion. It was undetermined whether the aforementioned norms in applied music were factors in limiting the development of percussion curricula that was in accordance to the NASM standards.
Chapter 3: Research Method

A non-experimental quantitative design from a postpositivist paradigm was used to compare variables represented in the 11 research questions. The purpose of this chapter is to provide a description of the (a) research method design, (b) participants, (c) materials and instruments, (d) operational definition of variables, (e) data collection and analysis, (f) assumptions, limitations, and delimitations, and (g) ethical assurances. The following problem statement, purpose statement, research questions, and hypotheses guided this study.

Although learning outcomes and goals for a percussion program within a given institution will vary, these goals must meet some basic criteria in order to be successful (Franklin et al., 2009). In this instance, goals may refer to incorporating percussion standards that prepare students for the workplace. Unfortunately, there have been few comprehensive attempts to examine factors that influence applied percussion curricula development (Fisher, 2004; Nave, 2001). These authors along with Steele (1988) created surveys that were informative documents, though they focused on content rather than the development process or adherence to standards. There is also the position that applied percussion must be individually tailored; an overly formalized approach may be construed as standardization (Beck, 1978). Thus, instructors may resist standards to avoid threats to artistic and pedagogical freedom. However, it is also possible that instructors are influenced by long-established cultural norms that engender a resistance to a change in curricula (Fredrickson, 2007; Gaunt, 2007; Shulman, 2004; Wexler, 2009).

Nonetheless, NASM institutions are “responsible for participating in revisions and additions to the standards as well as maintaining compliance with them as they are
developed” (NASM, 2009, p. 16). Irrespective of specialization, students must acquire the NASM Common Body of Knowledge and Skills that constitute a foundation for work and continuing growth as music professionals (NASM, 2009). However, NASM does not require courses to align with every standard, though it is clear that standards shall be integrated throughout the music curriculum. In turn, applied curricula may lack explicit reference to the NASM guidelines. The problem is percussion programs may not meet the intent of the NASM standards, though the degree to which each standard is met is determined by specialization and individual need. Neglecting to meet standards could prove problematic since students may lack requisite skills to succeed in the teaching and performance environment (Rege, 2008; Ruch, 2009). In addition, determining the influence of the NASM standards is important since willful neglect could be indicative of institutional norms that are contrary to standards based initiatives and whether schools of music value the NASM framework.

The purpose of this quantitative research study was to determine if the NASM standards influenced the development of undergraduate applied percussion curricula. Additional purposes were to determine if barriers and external factors affect the implementation of standards, and if barriers, external factors, and/or the essential nature of standards were associated with the existence of the NASM standards in current applied percussion curricula. For this study, barriers were finances, equipment, and facilities. External factors were administrators, colleagues, professional organizations, and professional development opportunities. The sample was non-probabilistic, purposive, and heterogeneous, consisting of 350 undergraduate percussion instructors from NASM Regions 6 and 7. A self-designed cross-sectional web survey via Survey Monkey was
used to assess and measure data. This study used descriptive statistics (frequency distributions, mean, median, mode, and standard deviation), Cronbach’s Alpha, Kruskal-Wallis test, Games-Howell *post hoc* test, and Spearman's Rank Order Correlation Coefficient to conduct statistical analyses.

Specifically, the research focused on whether applied percussion curricula address the NASM Common Body of Knowledge and Skills and degree requirements as outlined in Section VIII (All Professional Baccalaureate Degrees in Music and All Undergraduate Degrees Leading to Teacher Certification) in the *NASM 2009-2010 Handbook* (NASM, 2009). These included (a) performance, (b) musicianship skills and analysis, (c) composition and improvisation, (d) history and repertory, (e) technology, and (f) synthesis (NASM, 2009). Although there may be a perception that outlining common areas of emphasis is standardization, this was not the objective. NASM does not impose an arbitrary taxonomy of activities and timelines for applied music. The NASM guidelines clearly articulate that materials used within a course of study are at the discretion of the school of music and individual instructor as long as the intent of the standards is met.

This quantitative study investigated four dependent variables based on respondents’ perceptions and three independent variables based on demographic categories (Years of Teaching, Level of Education, and Teaching Contract). Dependent variables, based on descriptive statistics, included the extent to which respondents agreed (perceptions) that the NASM standards were essential for the undergraduate curriculum; the extent to which respondents agreed (perceptions) that NASM standards existed in the undergraduate curriculum; the extent to which respondents agreed (perceptions) that there
were barriers to curriculum development; and the extent to which respondents agreed (perceptions) that external factors influenced curriculum development. Additionally, the study investigated differences in median agreement (perceptions) according to demographic variables (independent). Finally, the intended audience was undergraduate percussion instructors, aspiring instructors, and schools of music administrators.

The intent of the following research questions was to gather data that contributed to the area of study. The research base included 19 percussion syllabi from NASM Regions 6 and 7 along with numerous articles and dissertations on this very subject. These foundational elements enabled the development of viable research questions. Each question served as a category for which survey questions were developed. Also, the hypotheses were predictions based on prior literature and studies on topics similar to the proposed dissertation.

**Q1.** To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills is essential to the undergraduate percussion curriculum?

**Q2.** To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills exists in the current undergraduate percussion curriculum?

**Q3.** To what extent do percussion instructors perceive funding, equipment, and facilities serve as barriers in developing students’ common body of knowledge and skills as specified by the NASM standards?

**Q4.** To what extent do percussion instructors perceive that external factors such as administrators, colleagues, professional organizations, and professional development
influence the development of the undergraduate percussion curricula in accordance with the NASM Common Body of Knowledge and Skills?

Q5. Based on years of teaching, level of education, and teaching contract, what differences exist in percussion instructors' perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum?

Q6. Based on years of teaching, level of education, and teaching contract, what differences are there in percussion instructors' perceptions that the NASM Common Body of Knowledge and Skills exists in the current undergraduate percussion curriculum?

Q7. Based on years of teaching, level of education, and teaching contract, what differences exist in percussion instructors' perceptions that barriers (finances, equipment, and facilities) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills?

Q8. Based on years of teaching, level of education, and teaching contract, what differences exist in percussion instructors' perceptions that external factors (administrators, colleagues, professional development, and professional organizations) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills?

Q9. Is there a relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula?

Q10. Is there a relationship between instructors’ perceptions of external factors that influence the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula?
Q11. Is there a relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula?

H1₀. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H1ₐ. Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H2₀. Based on level of education, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H2ₐ. Based on level of education, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H3₀. Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H3ₐ. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.
H4₀. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H4ₐ. Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H5₀. Based on level of education, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H5ₐ. Based on level of education, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H6₀. Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H6ₐ. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H7₀. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that barriers (finances, equipment, and facilities) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.
H7a. Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H8b. Based on level of education, there is no significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H8a. Based on level of education, there is a significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H9b. Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H9a. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H10b. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that external factors (administrators, colleagues, professional development, and professional organizations) influence the development of
undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H10a.** Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H11b.** Based on level of education, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H11a.** Based on level of education, there is a significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H12b.** Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H12a.** Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.
H13\(_0\): There is no significant relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

H13\(_a\): There is a significant relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

H14\(_0\): There is no significant relationship between instructors’ perceptions that external factors influence the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

H14\(_a\): There is a significant relationship between instructors’ perceptions that external factors influence the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

H15\(_0\): There is no significant relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

H15\(_a\): There is a significant relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.
Research Methods and Design

A non-experimental quantitative design from a postpositivist paradigm was used to compare variables represented in the research questions. Postpositivists hold that much of educational research can be and ought to be scientific. Qualitative research is epistemically irrelevant since it enables the researcher to advance hypotheses without competent and probing evaluation or search for disconfirming evidence (Phillips & Burbules, 2000). On the contrary, there is the belief that an ostensible commitment to dogmatic values, namely reductionist and isolationist approaches to analyze data, lends to the distortion of data and bias (Howe, 2009; Trochim & Donnelly, 2008). It is possible that focusing on quantitative data reduces the research to impersonal data (Cozby, 2009). In effect, taking the human element out of the equation has consequences.

Although there are legitimate reservations, a quantitative design from a postpositivist paradigm was optimal for the proposed research. The intent was to examine percussion instructors’ perceptions in NASM Regions 6 and 7. It would not be time efficient or possible to conduct a qualitative analysis consisting of interviews and site visitation to schools in 18 states. Additionally, a non-probabilistic approach was the correct method for this study because the intent was to examine perceptions across the two aforementioned NASM Regions. If the intent were to examine all NASM Regions, then a probabilistic method would be preferable since the number of potential instructors would rise ten-fold. Moreover, recent research in applied music has about a 20% participation rate. In order to maximize participation and obtain the required number to meet the power analysis, it was of utmost importance to allow all percussion instructors from NASM Regions 6 and 7 to participate. Finally, the potential for a high volume of
non-probabilistic data outweighs the miniscule amount that a probabilistic sample would provide.

The design presented a manageable structure to fully examine the research questions and hypotheses. Multiple measures or observations were used in order to get a better read on what was happening in reality (Trochim & Donnelly, 2008). Multiple measurements in this case refer to providing ample opportunity to pretest the prescribed survey instrument. The benefit of this approach was that the instrument could be modified to meet a suitable measure of reliability before distribution to the intended population of study. Additionally, a manageable sample of participants who have similar characteristics was used. Without a reductionist approach, there was the possibility that too many participants could lead to data mismanagement. With this in mind, it was better to weigh on the side of caution with what was a seemingly manageable situation. Finally, the intent was to generalize to the population of undergraduate applied percussion instructors in NASM Regions 6 and 7, but keeping in mind that generalization was not infallible. Ornstein and Hunkins (2004) suggested that postpositivists are “open to new ideas, to surprise, to content taking off in new directions in consequence of some unanticipated event” (p. 213). Thus, gathered data may support a revision of preconceived assumptions.

Using comparative statistics, the study attempted to discover the magnitude of the differences between groups in reference to the dependent and independent variables (Douglas, 2009). In order to set the foundation for statistical analyses, research questions 1-4 used descriptive statistics to aggregate instructors’ perceptions of the NASM standards. Differences between groups were accomplished in hypotheses 1-12, which
were based on research questions 5-8. Additionally, the study measured the relationship between instructors’ perceptions. This was accomplished in hypotheses 13-15, which were based on research questions 9-11.

The proposed research did not emphasize experimental or quantitative questions which compared and contrasted test data or experiments. This ex-post facto study refers to (in the context of this research study) the assumption that participants’ perceptions were already formed. No attempt was made to influence participants’ attitudes through applying a treatment or program.

Utilizing t tests or analysis of variance was impractical since data of this nature should use random samples and/or analyze means. Means refers to a test which measures data under conditions of applying a treatment or program, such as before and after (Norusis, 2008). Therefore, this study used descriptive statistics (frequency distributions, mean, median, mode, and standard deviation), Cronbach’s Alpha, Kruskal-Wallis test, Games-Howell post hoc test, and Spearman Rank Order Correlation Coefficient to conduct statistical analyses. All statistical analyses were performed via SPSS 19.0 for Windows 7.

**Participants**

The population sample was non-probabilistic, purposive, and heterogeneous, consisting of 350 adjunct, full-time, and tenured undergraduate percussion instructors from 183 baccalaureate granting institutions in NASM Regions 6 and 7. The intent was to examine percussion instructors’ perceptions in NASM Regions 6 and 7, rather than an exhaustive study of all nine regions. Regions 6 and 7 consist of schools of music from 18 mid-Atlantic, New England, and southeastern states, and one commonwealth. These
include Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, Vermont, Virginia, and West Virginia (NASM, 2010).

NASM accredited community and junior colleges, non-degree granting institutions, pre-collegiate arts schools, and schools without a percussion program were not included in the study. Within this study all higher learning institutions were not-for-profit. There were 98 state supported public colleges and universities, 21 private colleges and universities, 27 private liberal arts and endowed colleges and universities, 29 religiously affiliated colleges and universities, and eight conservatories of music. Fourteen of the religiously affiliated schools also claimed to be liberal arts institutions, but were only counted one time.

Instructor names were obtained from the NASM and College Music Society directories and each school of music website. Individuals who teach at multiple NASM institutions within a given region were only counted one time. After an exhaustive account of each school of music website, there were approximately 25 instructors who appeared to teach at multiple NASM institutions.

Prospective participants span the gamut of percussion background and teaching responsibilities. This was not an all-inclusive list since schools of music do not post every piece of information on their web site. However, the following provides invaluable insight which depicts the diversity of the percussion community. First, full-time faculty members perform multiple roles within a percussion program. Holly (1990) stated, “Very few full-time percussion positions mean only percussion these days. It is not unusual for the percussion teacher to also instruct theory, music appreciation, direct the
marching band or work in the jazz curriculum” (p. 12). In fact, one previous study indicated that 52% of percussion instructors held positions outside of applied music (Fisher, 2004). Adjunct percussion faculty members tend to specialize in an area of percussion. The following adjunct breakdown is for NASM Region 6. These include drum set (12), classical and concert (11), timpani (8), world music (3), hand drumming (3), marimba (1), vibraphone (2), percussion ensemble (1), marching band (1), Brazilian ensemble (1), jazz percussion (10), and electronic percussion (1). It is likely that Region 7 contains a similar breakdown.

The power analysis was an integral component of this quantitative design. In general, .80 power is considered the minimally acceptable level (Houser, 2007). It is the probability of rejecting the null hypothesis when it is in fact false (Coladarci, Cobb, Minium & Clarke, 2008). Higher power levels require large samples, possibly inhibiting completion of the research within time constraints. Tests analyzing non-normal data, such as the Chi-square or Kruskal-Wallis, are considered insensitive and require larger samples to detect a statistical significance as compared to tests based on normal distribution and random sampling. In non-normal data, fewer than 30 subjects are not considered powerful enough to detect changes in an outcome variable. Samples with more than 200 subjects generate only marginal improvements in power (Houser, 2007). Thus, this study used .80, meaning there is an 80% probability that the determined amount of participants will be enough to find a statistical relationship when such a difference actually exists (Ebanks, 2010; Coe, 2002).

The G*Power tool assisted in determining the appropriate sample size. For this study, the Kruskal-Wallis tests consisted of 5X5, 5X3 and 5X2 blocks, which resulted in
4 to 16 $df$ and required approximately 48 to 76 participants. Achieving the appropriate amount of participation will improve one’s ability to reject null hypotheses when they are false (Norusis, 2008). With an approximate participant base of 76, this equated to 22% of the instructors in NASM Regions 6 and 7. When analyzing previous studies in applied music, 22% was on par with average participation rates. The figure below represents the approximate number of participants needed based on the power analysis.

**Figure 1**

*Approximate sample required based on 80% power with 16 df*

In order to achieve maximum participation, a pre-survey letter was emailed two-weeks prior to the open survey period. This letter served two purposes. First, it informed the participant that he or she was invited to participate (Douglas, 2009). This provided a notice to teachers to not delete further emails, possibly increasing the participation rate (Wiersma & Jurs, 2005). To entice greater participation, instructors were entered into a random drawing which awarded four Percussive Arts Society student memberships worth $65$ dollars each. Awarded instructors were encouraged to select an undergraduate...
percussion student who required financial assistance. The use of gratuities may enhance the response rate by as much as 20 percent (Hopkins & Gullickson, 1992).

**Materials and Instruments**

The research used the cross-sectional survey method as the primary means to gather data relevant to the purpose of this non-experimental quantitative study; it contained 58 questions. The intended purpose of the proposed survey was to address contributing factors beyond previously gathered curricula and research. The survey method was a primary tool used not only by postpositivists but also by a majority of researchers on applied curricula. Furthermore, many applied music studies (Fisher, 2004; Ruch, 2009; & Wexler, 2009) used web-based instruments such as Survey Monkey to assist in the process. This enables a single researcher with limited resources the ability to collect and analyze data from a sample within a short time. Data can be collected within days, and analyzed within weeks (Ebanks, 2010). This is unlike collecting data via ground mail, interview, and site visitation that take an unlimited amount of time to collect. For this study, visiting every school of music or conducting approximately 350 interviews was not possible within the pre-determined time constraints.

Since a careful search of the literature provided no already validated survey instrument to measure the variables in this study accurately, the study used a researcher-developed survey instrument to satisfy this investigation (Hillbrick, 1999). The survey was developed objectively and in tandem with experts on percussion curricula in order to maximize obtaining relevant data. Moreover, survey questions were aligned in relation to the research questions and proposed variables. The variables and research questions derived from existing issues in undergraduate applied percussion as explicated by the
literature review. Although the survey questions were not an exhaustive account of what influences curriculum development, the instrument in itself will serve as a guide for future researchers to build upon.

Using experts in applied percussion curricula to develop the survey mitigated concerns about external and construct validity. For this research, members of the Percussive Arts Society College Pedagogy Committee, leaders from the National Conference on Percussion Pedagogy, and several other hand-selected experts were invited to participate in the instrument design process. Engaging in discussion with the foremost authorities in percussion is not only helpful for validating the research process, but is also ethical (Creswell, 2009; Ornstein & Hunkins, 2004; Trochim & Donnelly, 2008). Additionally, validity was maximized since the instructors were “aware of nuances in the construct that may be rare or elusive of which the layperson may not be aware” (Rymarchyk, 2010, para. 8). However, validity was not limited to expert opinion. The experts also participated by completing the initial survey, thereby providing statistical backing for the survey used in this study. This prevented skewed and invalid data which could have resulted from participants misinterpreting survey questions (Wiersma & Jurs, 2005). As a matter of disclosure, two of the researcher’s former instructors and a colleague were used since they are respected authorities in the percussion community.

Specifically, 23 percussion experts received an invitation email (see Appendix A) on July 30, 2011 to participate in the survey development process. On August 3, 2011 they received an email with a Survey Monkey link to the proposed survey. The survey closed on August 9, 2011. The intent was for them to review the research and survey
questions and provide suggestions for improvement in terms of clarity, direction, and overall flow. The survey questionnaire used terminology familiar to the participants, meaning it was based on educational vocabulary and vernacular commonly used. This process assisted with focusing the survey into a more user-friendly product (Sorenson, 2007; Wexler, 2009).

Of 23 email invitations, 15 instructors participated. The initial survey results achieved >.75 Cronbach’s Alpha for each survey construct, thus indicating a reliable instrument. Feedback established two main themes: reduce the number of questions and provide a copy of the standards prior to entering the survey. As suggested by the participating instructors, the survey was reduced from 82 questions to 58 questions. In addition, a copy of the NASM Common Body of Knowledge and Skills was provided directly after an instructor indicated his or her consent to participate. Each construct was represented by two survey questions instead of the planned three per construct. Several instructors added that the survey was too repetitive and questions were rewordings of previous questions. That was the intent since similar questions were needed in order to measure reliability of a construct. This particular issue demonstrated that the applied percussion community has dealt minimally with survey questionnaires beyond one question per construct and measures of reliability.

On August 6, 2011 an invitation email for the pilot study was sent to 50 randomly chosen instructors from NASM Region 5. This region consists of schools of music from Indiana, Michigan, and Ohio. The primary reason for the pilot study was to assess reliability and functionality of the web-survey over a 1-week period. Data was collected and entered into two Microsoft excel spreadsheets, and then entered into SPSS 19.0 two
times. Following this action, data was compared in order to minimize mistakes. This was a crucial point since continuing research with an unreliable instrument could prove detrimental to the end product. In order to measure reliability, each construct was represented by two questions in the proposed survey - a compromise based on previous input (see Appendix C). This assisted with ensuring that participants interpreted the questions as planned. Reliability was measured using Cronbach’s Alpha, a form of split half reliability. For most research, a .70 reliability coefficient is acceptable (Cozby, 2009). The pilot study occurred from August 9, 2011 to August 16, 2011. It had 16 participants and achieved >.70 Cronbach’s Alpha for each survey construct, thus indicating a reliable instrument to use for the intended population of study. An outline illustrating the survey constructs and questions is provided below.

Table 1

<table>
<thead>
<tr>
<th>NASM Knowledge and Skill</th>
<th>Survey Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>1, 26</td>
</tr>
<tr>
<td>Musicianship skills and Analysis</td>
<td>2, 27</td>
</tr>
<tr>
<td>Composition and Improvisation</td>
<td>3, 28</td>
</tr>
<tr>
<td>History and Repertory</td>
<td>4, 29</td>
</tr>
<tr>
<td>Technology</td>
<td>5, 30</td>
</tr>
<tr>
<td>Synthesis</td>
<td>6, 31</td>
</tr>
</tbody>
</table>
Table 2
*Percussion instructors’ perceptions whether the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum*

<table>
<thead>
<tr>
<th>NASM Knowledge and Skill</th>
<th>Survey Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>7, 32</td>
</tr>
<tr>
<td>Musicianship skills and Analysis</td>
<td>8, 33</td>
</tr>
<tr>
<td>Composition and Improvisation</td>
<td>9, 34</td>
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<tr>
<td>History and Repertory</td>
<td>10, 35</td>
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<tr>
<td>Technology</td>
<td>11, 36</td>
</tr>
<tr>
<td>Synthesis</td>
<td>12, 37</td>
</tr>
</tbody>
</table>

Table 3
*Potential barriers in developing students’ common body of knowledge and skills as specified by the NASM standards*

<table>
<thead>
<tr>
<th>Potential Barrier</th>
<th>Survey Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding</td>
<td>13, 38</td>
</tr>
<tr>
<td>Equipment</td>
<td>14, 39</td>
</tr>
<tr>
<td>Facilities</td>
<td>15, 40</td>
</tr>
</tbody>
</table>
Table 4

*Percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills*

<table>
<thead>
<tr>
<th>External Factor</th>
<th>Survey Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators</td>
<td>16, 17, 18, 41, 42, 43</td>
</tr>
<tr>
<td>Colleagues</td>
<td>19, 20, 44, 45</td>
</tr>
<tr>
<td>Professional Organizations</td>
<td>21, 46</td>
</tr>
<tr>
<td>Professional Development</td>
<td>22, 23, 24, 25, 47, 48, 49, 50</td>
</tr>
</tbody>
</table>

Table 5

*Demographic information for applied percussion instructors who teach in NASM Regions 6 and 7*

<table>
<thead>
<tr>
<th>Demographic Information</th>
<th>Survey Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of teaching</td>
<td>51</td>
</tr>
<tr>
<td>Highest level of education completed</td>
<td>52</td>
</tr>
<tr>
<td>Teaching Contract</td>
<td>53</td>
</tr>
<tr>
<td>NASM Region</td>
<td>54</td>
</tr>
<tr>
<td>Type of Institution</td>
<td>55</td>
</tr>
<tr>
<td>Instructor Status (Director of Percussion Studies)</td>
<td>56</td>
</tr>
</tbody>
</table>
Operational Definition of Variables

Instructor perception of the essential nature of NASM standards variable.
This was one of four dependent variables used in the study. It was measured by participants’ responses to survey item numbers 1 to 6 and 26 to 31. Responses were on an interval scale. One of the most common interval scales used in surveys is the Likert-type scale. Likert scaling is often used in attitude or opinion surveys that ask respondents to state their level of agreement or disagreement with an item. The response choices were mutually exclusive and collectively exhaustive, meaning that the respondent could not select more than one category and that the choices covered all of the possible responses (Goddard & Villanova, 2010). A 5-point Likert-type scale was used for each question. Possible selections were: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree.

Instructor perception of the existence of NASM standards variable. This was one of four dependent variables used in the study. It was measured by participants’ responses to survey item numbers 7 to 12 and 32 to 37. Responses were on an interval scale. A 5-point Likert-type scale was used for each question. Possible selections were: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree.

Instructor perception of barriers variable. This was one of four dependent variables that used in the study. Barriers in developing students’ common body of knowledge and skills for this study were lack of equipment, facilities, and funding. It was measured by participants’ responses to survey item numbers 13 to 15 and 38 to 40. Responses were aggregated for hypotheses testing and presented as an individual item analysis for descriptive statistics. Responses were on an interval scale. A 5-point Likert-
type scale was used for each question. Possible selections were: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree.

**Instructor perception of external factors variable.** This was one of four dependent variables that used in the study. In this study external factors which possibly influenced the development of undergraduate percussion curricula in accordance with the NASM Common Body of Knowledge and Skills were administrators, colleagues, professional organizations, and professional development. It was measured by participants’ responses to survey item numbers 16 to 25 and 41 to 50. Responses were aggregated for hypotheses testing and presented as an individual item analysis for descriptive statistics. Responses were on an interval scale. A 5-point Likert-type scale was used for each question. Possible selections were: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree.

**Years of Teaching variable.** This was one of six independent variables used in the study. The variable was used for descriptive statistics and hypotheses testing. It was measured by participants’ responses to survey item number 51. Instructors indicated number of years teaching applied percussion at the undergraduate level. Responses were categorized on an ordinal scale. Four possible selections for this question were 1 = 0-9; 2 = 10-19; 3 = 20-29; 4 = >30.

**Level of Education variable.** This was one of six independent variables used in the study. The variable was used for descriptive statistics and hypotheses testing. It was measured by participants’ responses to survey item number 52. Responses were on a nominal scale. Three possible selections for this question were: 1 = Bachelor’s; 2 =
Master’s; and 3 = Doctorate. Instructors were asked to indicate highest level of education completed.

**Teaching Contract variable.** This was one of six independent variables used in the study. The variable was used for descriptive statistics and hypotheses testing. It was measured by participants’ responses to survey item number 53. Responses were on a nominal scale. Kerlinger and Lee (as cited in Goddard & Villanova, 2010) pointed out that nominal scales are categorical in nature. That is, the values associated with the variable of interest have no real numerical meaning but describe categories. The values cannot be added, subtracted, multiplied, or divided, but are more like labels used to describe the variable of interest. Instructors were asked to identify their current teaching contract. Four possible selections for this question were: 1 = Tenured; 2 = Full-time contract; 3 = Part-time contract; 4 = Adjunct.

**NASM Region variable.** This was one of six independent variables used in the study. The variable was used only for descriptive statistical analyses. It was measured by participants’ responses to survey item number 54. Responses were on a nominal scale. Two possible selections for this question were: 1 = Region 6 and 2 = Region 7. Instructors were asked to indicate their school’s NASM Region.

**Type of Institution variable.** This was one of six independent variables used in the study. The variable was used only for descriptive statistical analyses. It was measured by participants’ responses to survey item number 55. Responses were on a nominal scale. Two possible selections for each question were: 1 = University/College and 2 = Conservatory. Instructors were asked to indicate type of institution in which they currently taught.
Instructor Status. This was one of six independent variables used in the study. The variable was used only for descriptive statistical analyses. It was measured by participants’ responses to survey item number 56. Instructor status referred to whether he or she was the Director of Percussion Studies. Responses were on a nominal scale. Two possible selections for each question were: 1 = Yes and 2 = No.

Data Collection, Processing, and Analysis

The primary concern for data collection was survey timeline. The timeline consisted of three periods. These included (a) 1-week expert panel input, (b) 1-week pilot study (as discussed previously), and (c) 3-week open survey. Expert panel input referred to using experts in applied percussion to provide invaluable insight on how to improve and edit the proposed survey and accompanying process. The 1-week pilot study was offered to 50 randomly selected percussion instructors within NASM Region 5 (Indiana, Michigan, and Ohio) in order to assess instrument reliability and web-survey functionality. The open survey period referred to mass distribution of the survey to instructors in NASM Regions 6 and 7. Information gathered during the open period was used in the dissertation findings section.

The open survey period for the intended population of study was August 16, 2011 to September 5, 2011. An email was sent on August 9, 2011, one week prior to the open survey period, to invite 265 applied percussion instructors in NASM Regions 6 and 7 to participate in the research. The email provided the instructor an option to participate in a web-based survey via Survey Monkey. Survey reminders were sent via weekly follow-up emails and one final email the day prior to closeout.
Processing data for the proposed survey adhered to the aforementioned timeline in order to provide ample opportunity to analyze data. Upon receipt of a survey, the information was downloaded from Survey Monkey into two different Microsoft Excel spreadsheets. Following this action, data and format were then compared in order to minimize mistakes. This ensured input accuracy. Waiting to input large amounts of survey responses would undoubtedly increase the likelihood for mistakes. This was a crucial point since continuing research with an unreliable instrument could prove detrimental to the end product. After confirming accuracy of input, data was entered into two SPSS 19.0 spreadsheets two times.

Additionally, there was a data audit every week of the open survey period. At the end of survey period, there was an additional three audits, totaling five for the 3-week open survey period. Each of the final three audits occurred on different days in order to minimize clerical errors as a result of fatigue. To ensure accuracy and legitimacy of data, all responses were retained by the author and securely stored in the author’s safe. Trochim and Donnelly (2008) suggest retaining records for 5 to 7 years.

As stated previously, survey questions measured variables via descriptive statistics (frequency distributions, mean, median, mode, and standard deviation), Cronbach’s Alpha, Kruskal-Wallis test, Games-Howell post hoc test, and Spearman Rank Order Correlation Coefficient. All statistical analyses were performed via SPSS 19.0 for Windows 7. The selection of the non-parametric Kruskal-Wallis test was based on the fact that sample data violated the assumptions needed to conduct a one-way analysis of variance (ANOVA). An analysis of variance was impractical since data of this nature should use random samples and/or analyze means. Means refers to a test which measures
data under conditions of applying a treatment or program, such as before and after (Norusis, 2008). Moreover, the sample for this study was non-probabilistic and heterogeneous, thereby possibly violating the assumption of homogeneity. A .05 alpha confidence level ($p < .05$) was used for the Kruskal-Wallis test, measuring group median differences in hypotheses 1-12 according to three demographic independent variables (Years of Teaching, Level of Education, and Teaching Contract). A $p$ value is the probability that, if $H_0$ is true, of observing a sample result as deviant as the result actually obtained (Coladarci et al., 2008). When alpha is set at .05, the probability of making a Type 1 error is 5%. Experts consider 5% acceptable when conducting research in education (Ebanks, 2010). Thus, any result that was $p < .05$ resulted in rejecting the null hypothesis.

The Kruskal-Wallis test only indicates that there is or is not a difference amongst group medians; it does not indicate where the differences occur (Laerd, 2011). Therefore, if the null hypothesis was rejected, a post hoc test was conducted to confirm where the differences occurred between groups. For this research, the non-parametric Games-Howell post hoc test was used. As with Kruskal-Wallis test, an alpha confidence level of .05 was used to determine group median differences.

The Spearman Rank Order Correlation Coefficient ($r_s$) was used to measure the extent to which respondents’ perceptions of external factors, barriers, and essential nature of standards were associated with the existence of the NASM standards in the undergraduate curriculum for hypotheses 13-15. The test is the non-parametric measure of the strength and direction of association that exists between two variables measured on at least an ordinal scale (Laerd, 2011; Norusis, 2008). Essentially, the test should display
a monotonic relationship between the variables. They will either increase together, or as one increases the other decreases. Relationship is determined on a scale of -1 to +1. The closer to -1, the stronger the negative relationship; as one increases the other decreases. The closer to +1, the stronger the positive relationship, meaning both variables will increase. As with the Kruskal-Wallis and Games-Howell test, \( r \) was analyzed using an alpha confidence level of .05, meaning that the null hypothesis was rejected if \( p < .05 \).

Null hypothesis number one is: Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum. Performance, musicianship skills and analysis, composition and improvisation, history and repertory, technology, and synthesis are the six requisite NASM Common Body of Knowledge and Skills. A 5-point Likert-type scale was used to measure whether instructors perceived the standards to be essential to the curriculum. The median, mode, frequency distributions and standard deviation were used in conjunction with the mean to supplement data analysis. The mean has tractability, meaning that it has algebraic qualities and experiences less sampling variations when comparing multiple groups, suggesting that it possesses stability (Coladarci et al., 2008). However, a large standard deviation indicates that there are probably large differences between individual scores (Laerd, 2011). With a large \( sd \) the median would be a much better measure of center (Saha, 2005). Additionally, the Kruskal-Wallis test was used to determine statistical significance between the dependent variable (perceptions) and independent variable (Years of Teaching). The Games-Howell post hoc test was used if the Kruskal-Wallis test indicated a significant statistical difference between group medians.
Null hypothesis number two is: *Based on level of education, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.*  
The same descriptive and inferential tests from Hypothesis number one were used to test Hypothesis number two. The only difference was the tested variable. In this instance, the variable was Level of Education versus Years of Teaching.

Null hypothesis number three is: *Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.*  
The same descriptive and inferential tests from Hypothesis number one were used to test Hypothesis number three. The only difference was the tested variable. In this instance, the variable was Teaching Contract versus Years of Teaching.

Null hypothesis number four is: *Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.*  
The same descriptive and inferential tests from Hypothesis number one were used to test Hypothesis number four.

Null hypothesis number five is: *Based on level of education, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.*  
The same descriptive and inferential tests from Hypothesis number one were used to test Hypothesis number five. The only difference was the tested variable. In this instance, the variable was Level of Education versus Years of Teaching.
Null hypothesis number six is: Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum. The same descriptive and inferential tests from Hypothesis number one were used to test Hypothesis number six. The only difference was the tested variable. In this instance, the variable was Teaching Contract versus Years of Teaching.

Null hypothesis number seven is: Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills. The same descriptive and inferential tests from Hypothesis number one were used to test Hypothesis number seven. However, there was one major difference: barriers were aggregated for hypotheses testing.

Null hypothesis number eight is: Based on level of education, there is no significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills. The same descriptive and inferential tests from Hypothesis number one were used to test Hypothesis number eight. However, there were two major differences. First, barriers were aggregated for hypotheses testing. Secondly, the variable was Level of Education versus Years of Teaching.

Null hypothesis number nine is: Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills. The same descriptive and inferential tests from
Hypothesis number one were used to test Hypothesis number nine. However, there were two major differences. First, barriers were aggregated for hypotheses testing. Secondly, the variable was Teaching Contract versus Years of Teaching.

Null hypothesis number ten is: Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills. The same descriptive and inferential tests from Hypothesis number one were used to test Hypothesis number ten. However, there was one major difference: external factors were aggregated for hypotheses testing.

Null hypothesis number eleven is: Based on level of education, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills. The same descriptive and inferential tests from Hypothesis number one were used to test Hypothesis number eleven. However, there were two major differences. First, external factors were aggregated for hypotheses testing. Secondly, the variable was Level of Education versus Years of Teaching.

Null hypothesis number twelve is: Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills. The same descriptive and inferential tests from Hypothesis number one were used to test Hypothesis number twelve. However, there were two major differences. First, external factors were
aggregated for hypotheses testing. Secondly, the variable was Teaching Contract versus Years of Teaching.

Null hypothesis number thirteen is: *There is no significant relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.* A 5-point Likert-type scale was used to measure instructors’ perceptions of barriers and existence of the NASM standards in applied percussion curricula. The Spearman Rank Order Correlation Coefficient was used to measure strength of relationship between the two aforementioned variables. An alpha confidence level of .05 was used.

Null hypothesis number fourteen is: *There is no significant relationship between instructors’ perceptions that external factors influence the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.* The same inferential test from Hypothesis number thirteen was used to test Hypothesis number fourteen. The only difference was the variable tested (external factors and existence of standards).

Null hypothesis number fifteen is: *There is no significant relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.* The same inferential test from Hypothesis number thirteen was used to test Hypothesis number fifteen. The only difference was the variable tested (essential nature and existence of standards).
Methodological Assumptions, Limitations, and Delimitations

The following assumptions were made for this study: (a) instructors taught at institutions that were bound by similar guidelines - the NASM standards; (b) the survey was a valid instrument since experts in the field of percussion guided its development; (c) the quantitative and comparative design was appropriate; (d) there was an expectation that participants answered the survey questions honestly; and (e) gathered data was accurate and authentic, thereby enabling a meaningful study.

Since schools of music in the proposed study were members of the same accreditation body, it was assumed that instructors who taught at these institutions comprehended the vernacular used by the *NASM Handbook* and the survey instrument. Secondly, although nowhere in the NASM standards does it say that applied music instructors are exempt from addressing the standards, there was the assumption that instructors knew of the broad requirement for a school of music to meet standards. However, the standards “constitute a framework of basic commonalities that provides wide latitude for the creativity of faculty, students, and institutions” (NASM, 2009, p. 72). In turn, it was assumed that instructors used a variety of methods to address standards wholly or partially. The degree to which instructors addressed the standards was unknown.

Since a careful search of the literature provided no already validated survey instrument to measure the variables in this study accurately, the study used a researcher-developed survey instrument to satisfy this investigation (Hillbrick, 1999). Alreck and Settle (as cited in Douglas, 2009) stated, “A measurement tool is only valid to the extent that it measures all of that it was created to measure” (p. 46). In turn, it was assumed that
experts with vast experience in the area of applied percussion were suitable advisors to
guide the direction of this study and validate the survey instrument. They are on the
frontlines of instruction; the researcher showed deference to the instructors.

The methodology for this design was comparative and quantitative. Using
comparative statistics via a survey instrument enabled the potential to obtain data from
large groups in an efficient and impartial manner. A qualitative study of this size was not
possible within the time constraints of this study. For instance, visiting every school of
music or conducting approximately 350 interviews would have been costly and
inefficient. Moreover, the complicated nature of interpreting and coding qualitative data
could introduce a subjective quality in the research and potentially threaten validity.

Previous research on applied percussion curricula indicated an interest in
developing curricula to meet students’ needs. As stated previously, discussions on
curricula based research have gained attention during annual seminars at PASIC and
NCPP. In turn, there was an assumption that with a vested interest in applied curricula,
there was no reason to suspect that instructors would sabotage data by making false
statements. Finally, gathered data accurately represented the population of this study.
This was due to the meticulous structure of inputting data into the SPSS 19.0 database.

There were three primary limitations to this study that could affect outcomes.
These included (a) sample size, (b) survey timeline, and (c) using only face validity to
develop the survey instrument. Although these may be potential threats to the research,
they were not so egregious that they prevented the study from accumulating meaningful
and measureable data.
This study used a non-probabilistic, purposive, and a heterogeneous sample, consisting of 350 adjunct, full-time, and tenured undergraduate percussion instructors from 183 baccalaureate granting institutions in NASM Regions 6 and 7. The intent was to generalize to the population of undergraduate applied percussion instructors in NASM Regions 6 and 7, rather than providing an exhaustive study of all nine regions. By minimizing the population, it was possible that this approach weakened external validity or the ability to generalize to the entire population of percussion instructors who teach at NASM institutions. Purposive sampling sacrifices generalization and may not provide enough representation of the target population. This means that those selected for the study may only partially represent the population being investigated (Keppel & Zedeck, 2001).

In order to mitigate overreaching, people who did not meet specified criterions for the study were eliminated. Institutions with common means, degree type, teacher qualifications, and affiliation were discriminators for participation. Specifically, this study mitigated threats to validity by ensuring that only NASM institutions were used in the study. Instructors from NASM accredited community and junior colleges, non-degree granting institutions, pre-collegiate arts schools, and schools without a percussion program were not included in the study. This ensured that teachers from four-year undergraduate institutions were the foundation of the proposed study.

Survey timeline was also a concern in terms of limitations for this study. The timing of this study was not the most optimal since it occurred during the four weeks prior to school returning for the fall semester. The major concern was that many music educators were out of the office during the summer traveling for performances and clinics
all over the world. Numerous emails were received indicating this exact concern from prospective participants. Out of 265 email invitations, only 85 entered the survey, with 64 completing it. However, this was enough participation to acquire meaningful data.

Nonetheless, the threat of low participation rates was mitigated by relying on an online survey. Dillman (as cited in Trochim & Donnelly, 2008) stated, “Perhaps the most important change in survey research over the past few decades has been the rise of the electronic or e-survey” (p. 119). They added that there is a greater chance of receiving survey responses using a web-based methodology versus ground based mail. If ground mail were used, many of the instructors would not have received the mail until after the open survey period. Moreover, an online survey takes out the variable of mail getting lost; sending to an incorrect address; and response waiting period. Regardless of the timing of the survey, recent studies in applied percussion have demonstrated 20-30% response rates (Clyde, 2001; Fisher, 2004; Nave, 2001; Sorenson, 2007). This study achieved a 24% participation rate.

This study solely used face validity to develop the survey instrument, meaning constructs were based on researcher perceptions and judgment. However, face validity is strengthened when using experts to validate what is measured (Trochim & Donnelly, 2008). As stated previously, expert opinions were used to modify the survey instrument. Although each expert’s experience with developing surveys was unknown, they were members of the PAS College Pedagogy Committee or the National Conference on Percussion Pedagogy. Thus, the experts were informed on issues that affect the development of applied percussion curricula. Moreover, instructors not only critiqued the survey, they also completed it. The Cronbach’s Alpha for each construct was >.75,
meaning the instrument was a reliable measure. Nevertheless, future studies may benefit by attempting to include additional measures of validity, such as convergent, discriminant, or concurrent validity. This is due to the fact that there is never a perfect definition for a variable, thus many researchers will use multiple methods to define variables (Cozby, 2009).

The following were possible delimitations to the study: (a) the study used instructors from two of the nine NASM Regions; (b) questions regarding how instructors met the NASM standards were not included; (c) and the survey was limited to 58 questions. Selecting only instructors from NASM Regions 6 and 7 was a purposeful delimitation of this study. Instructors from NASM Regions 6 and 7 were the focus, not instructors from every NASM accredited school of music. Furthermore, the study emphasized whether instructors accepted and included the NASM standards in the curriculum. It was beyond the scope of this research to seek how instructors accomplished each standard. Researchers are encouraged to extend this study by examining the specific manner that instructors address each standard. In turn, the study will serve as a platform for further research in the area of applied percussion curricula. Interested parties should be able to replicate the proposed study and compare and contrast NASM Regions.

The survey was limited to 58 questions. This was a purposeful delimitation to encourage participation. Survey length has been cited as a deterrent (Wexler, 2009; Sorenson, 2007). However, there were concerns with minimizing survey length. In this instance, there were two survey questions for each construct represented under the dependent variables. As stated previously, each construct was to have three questions,
but this was revised after receiving feedback from applied instructors during the survey design phase. Regardless, multiple questions per construct were needed to measure reliability. The tradeoff for the proposed study was to attain a higher participation rate versus sacrificing potential participants with a time consuming survey (Douglas, 2009).

**Ethical Assurances**

Maintaining ethical standards was of utmost importance since many people have been victims of deception and outright negligence. For example, the Milgram experiment demonstrated deception by means of falsifying the purpose of the study to the participants. From a negligent perspective, the Tuskegee syphilis study withheld treatment (penicillin) for 399 men who suffered from the disease in order to study long-term effects (Cozby, 2009). These are large scale examples which truly affect peoples’ lives as compared to the proposed study on the National Association of Schools of Music standards and the development of undergraduate applied percussion curricula. An analysis of past misdeeds was relevant - no matter the scale - in order to prevent ethical violations, knowingly or unknowingly. As a result, it was essential to address (a) privacy and confidentiality, (b) data management, (c) and informed consent.

Confidentiality and privacy are paramount to conducting ethical research. Punch (as cited in Creswell, 2009) stated “Research does involve collecting data from people, about people” (p. 87). Thus, it was impossible to avoid utilizing people for the proposed study. In order to complete the dissertation process in an ethical manner, it was imperative to protect research participants; develop trust with them; and guard against misconduct and impropriety that might reflect on their organizations or institutions (Creswell, 2009). Upon initial email contact with prospective participants, the
expectation of providing confidentiality and privacy was made clear. Only the researcher has access to the database containing survey data. Names or opinions attributed to specific individuals or schools will not be released without proper consent. This was to encourage participation but to preclude professional harm if one seeks to use comments against someone. When possible, any identifiers should be destroyed and codes be created to use for data collection and analysis (Hicks, 2006). Participants were identified by a number versus by name in the survey database.

Often the dissertation process requires the researcher to accumulate myriad sources of data. For this study, the management aspect was of crucial importance. One who lacks organizational skills may unknowingly misrepresent data. In turn, this can unintentionally cause one to perceive deception. In fact, fabrication of data is fraud (Cozby, 2009). Poor management skills can threaten the integrity of the work and possibly ruin one’s good name. Data mismanagement goes beyond the scope of quantitative data. It also refers to attributing quotes to people that were obtained through email correspondence or interview. Finally, there was a meticulous process for inputting data. In turn, data were an honest accounting of participants’ responses.

Research using adults and/or children must adhere to all ethical guidelines governing human subjects. Part of the process was to obtain approval from the University Institutional Review Board and informed consent from participants. Data collection did not commence until approval had been granted by Northcentral University. Approval was received on July 28, 2011. In order to acquire consent from prospective participants, the survey required the participant to check a box that indicated whether they read the informed consent letter prior to entering the survey.
Summary

A non-experimental quantitative design from a postpositivist paradigm was used to compare variables represented in the research questions. Phillips and Burbules (2000) posited that qualitative research was epistemically irrelevant and that it enabled the researcher to advance hypotheses without competent and probing evaluation or search for disconfirming evidence.

Using comparative statistics, the study attempted to discover the magnitude of the differences between groups in reference to the dependent and independent variables (Douglas, 2009). The proposed research did not emphasize experimental or quantitative questions which compared and contrasted test data or experiments. This ex-post facto study referred to the assumption that participants’ perceptions were already formed. The primary means of analyses were through descriptive statistics (frequency distributions, mean, median, mode, and standard deviation), Cronbach’s Alpha, Kruskal-Wallis test, Games-Howell post hoc test, and Spearman Rank Order Correlation Coefficient. All statistical analyses were performed via SPSS 19.0 for Windows 7.

The primary means to collect data was a cross-sectional survey containing 58 questions categorized among the 11 research questions which were developed from existing literature. The survey instrument attempted to determine if the NASM standards influenced the development of undergraduate applied percussion curricula in NASM Regions 6 and 7. Additional purposes were to determine if barriers and external factors affect the implementation of standards, and if barriers, external factors, and/or the essential nature of standards were associated with the existence of the NASM standards in current applied percussion curricula. The research questions investigated four
dependent variables based on respondents’ perceptions and three independent variables based on demographic categories (Years of Teaching, Level of Education, and Teaching Contract). Dependent variables, based on descriptive statistics, included the extent to which respondents agreed (perceptions) that the NASM standards were essential for the undergraduate curriculum; the extent to which respondents agreed (perceptions) that NASM standards existed in the undergraduate curriculum; the extent to which respondents agreed (perceptions) that there were barriers to curriculum development; and the extent to which respondents agreed (perceptions) that external factors influenced curriculum development. Additionally, the study investigated differences in median agreement (perceptions) according to demographic variables (independent).

The population sample used in the survey was non-probabilistic, purposive, and heterogeneous, consisting of 350 adjunct, part-time, full-time, and tenured undergraduate percussion instructors from 183 baccalaureate granting institutions in NASM Regions 6 and 7. The intent was to generalize to the population of undergraduate applied percussion instructors in NASM Regions 6 and 7, rather than providing an exhaustive study of all nine regions.
Chapter 4: Findings

The study was designed to add to existing research in the field of applied music, specifically applied percussion and the relationship of its teaching to the National Association Schools of Music standards. A non-experimental quantitative design was used to compare variables represented in the research questions. Using comparative statistics, the study attempted to discover the magnitude of differences between groups in reference to the dependent and independent variables (Douglas, 2009). This chapter contains a brief overview of the research purpose, participants, questions, analyses, results of the hypotheses, and statistics found from tested variables.

The purpose of this quantitative research study was to determine if the NASM standards influenced the development of undergraduate applied percussion curricula. Additional purposes were to determine if barriers and external factors affect the implementation of standards, and if barriers, external factors, and/or the essential nature of standards were associated with the existence of the NASM standards in current applied percussion curricula. Specifically, the research focused on whether applied percussion curricula addressed the NASM Common Body of Knowledge and Skills and degree requirements as outlined in Section VIII (All Professional Baccalaureate Degrees in Music and All Undergraduate Degrees Leading to Teacher Certification) in the NASM 2009-2010 Handbook (NASM, 2009). These included (a) performance, (b) musicianship skills and analysis, (c) composition and improvisation, (d) history and repertory, (e) technology, and (f) synthesis (NASM, 2009).

In addition, this study was guided by Shulman’s (1986) theory that teaching will remain stagnant if they are not trained to interweave the three content domains, which are
subject matter content knowledge, pedagogical content knowledge, and curricular content knowledge (Wexler, 2009). This study did not focus on subject matter content knowledge, since applied instructors at the collegiate level are regarded as having mastered their instrumental area. As stated previously, research indicated that applied instructors may lack exposure in the latter two areas, pedagogical and curricular content knowledge, thereby possibly precluding the infusion of the NASM standards in developing applied percussion curricula.

The population sample was non-probabilistic, purposive, and heterogeneous, consisting of 350 adjunct, full-time contract, part-time contract, and tenured undergraduate percussion instructors from 183 baccalaureate granting institutions in NASM Regions 6 and 7. The intent was to examine percussion instructors’ perceptions in NASM Regions 6 and 7, rather than conduct an exhaustive study of all nine regions. Regions 6 and 7 consist of schools of music from 18 mid-Atlantic, New England, and southeastern states, and one commonwealth. These include Connecticut, Delaware, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Puerto Rico, Rhode Island, South Carolina, Vermont, Virginia, and West Virginia (NASM, 2010).

NASM accredited community and junior colleges, non-degree granting institutions, pre-collegiate arts schools, and schools without a percussion program were not included in the study. Within this study all higher learning institutions were not-for-profit. There were 98 state supported public colleges and universities, 21 private colleges and universities, 27 private liberal arts and endowed colleges and universities, 29 religiously affiliated colleges and universities, and eight conservatories of music.
Fourteen of the religiously affiliated schools also claimed to be liberal arts institutions, but were counted one time.

Instructor names were obtained from the College Music Society (CMS) directory and each school of music website. Individuals who taught at multiple NASM institutions within a given region were counted one time. After an exhaustive account of each school of music website, there were approximately 25 instructors who appeared to teach at multiple NASM institutions. Of the approximately 350 percussion instructors in NASM Regions 6 and 7, only 265 email addresses were obtained. The missing email addresses were due in part to failed email links or lack of contact information listed in a school of music website and/or CMS directory.

An online cross-sectional survey method via Survey Monkey was the primary means to gather data relevant to the purpose of this study; it contained 58 questions. Since a careful search of the literature provided no already validated survey instrument to measure the variables in this study accurately, the study used a researcher-developed survey instrument to satisfy this investigation (Hillbrick, 1999). In order to mitigate concerns about external and construct validity and to maximize obtaining relevant data, experts in applied percussion curricula were recruited for the survey design process. Members of the Percussive Arts Society College Pedagogy Committee, leaders from the National Conference on Percussion Pedagogy, and several other hand-selected experts were invited to participate in the survey design process.

The survey was designed to satisfy the eleven research questions which guided the study. This study investigated four dependent variables based on respondents’ perceptions and three independent variables based on demographic categories (Years of
Dependent variables, based on descriptive statistics, included the extent to which respondents agreed (perceptions) that the NASM standards were essential for the undergraduate curriculum; the extent to which respondents agreed (perceptions) that NASM standards existed in the undergraduate curriculum; the extent to which respondents agreed (perceptions) that there were barriers to curriculum development; and the extent to which respondents agreed (perceptions) that external factors influenced curriculum development. Additionally, the study investigated differences in median agreement (perceptions) according to demographic variables (independent).

Of the 265 instructors that received an invitation to participate, 85 (32%) entered the survey with 64 (24%) completing it. Reference Tables 6, 7, and 8 below for demographic information used for tested hypotheses. In addition, demographic data was collected for several other variables that were not used for tested hypotheses. Data were for informational purposes, but could be used in greater detail for another study. Of the 58 participants who answered the question for Instructor Status variable, 70% \((n = 40)\) indicated they were the Director of Percussion Studies while 30% \((n = 18)\) indicated they were not the director. Of the 48 participants who answered the question for NASM Region variable, 50% \((n = 24)\) indicated they taught in Region 6 while 50% \((n = 24)\) indicated they taught in Region 7. Finally, of the 60 participants who answered the question for Type of Institution variable, 93% \((n = 56)\) indicated they taught in a university/college while 7% \((n = 4)\) indicated they taught in a conservatory.
### Table 6

Demographic information based on years of teaching undergraduate applied percussion

<table>
<thead>
<tr>
<th>Group Name</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 9 years</td>
<td>22</td>
<td>34</td>
</tr>
<tr>
<td>10 to 19 years</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>20 to 29 years</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>&gt; 30 years</td>
<td>15</td>
<td>24</td>
</tr>
</tbody>
</table>

### Table 7

Demographic information based on highest level of education completed

<table>
<thead>
<tr>
<th>Group Name</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Master’s</td>
<td>30</td>
<td>47</td>
</tr>
<tr>
<td>Doctorate</td>
<td>29</td>
<td>45</td>
</tr>
</tbody>
</table>
Table 8

Demographic information based on teaching contract

<table>
<thead>
<tr>
<th>Group Name</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjunct</td>
<td>17</td>
<td>27</td>
</tr>
<tr>
<td>Full-time Contract</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Part-time Contract</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Tenured</td>
<td>28</td>
<td>43</td>
</tr>
</tbody>
</table>

Prior to analyzing the 11 research questions and 15 hypotheses, a review of statistical assumptions was accomplished for the variables in this study. Because this study used a non-probabilistic sample, the non-parametric Kruskal-Wallis test was selected since data violated the assumptions needed to conduct a one-way analysis of variance (ANOVA). Non-parametric tests are often used in place of their parametric counterparts when certain assumptions about the underlying population are questionable, specifically equality of variance, normality, and homogeneity (Laerd, 2011). Non-parametric tests may be, and often are, more powerful in detecting population differences when certain assumptions are not satisfied (Laerd, 2011). However, sample observations for the Kruskal-Wallis test must be mutually independent and should have a similar continuous distribution (McDonald, 2011).

Mutual independence was accomplished by allowing a participant to fill out one survey via Survey Monkey. Members were not permitted to retake or reenter the survey for editing once completed. Continuous distribution was measured via skewness between
dependent and independent variables. For the most part, a similar skewness resulted within the independent variables (Years of teaching, Level of education, or Teaching Contract) when measured against the dependent variables (Essential, Existence, Barriers, and External Factors). Moreover, this study used the Spearman Rank Order Correlation Coefficient \( r_s \) since the normal distribution assumption for the parametric Pearson Product-Moment Correlation was not met. Assumptions for \( r_s \) were met, because variables were measured on ordinal, interval, or ratio scales and possess a monotonic relationship (Laerd, 2011).

Of the 15 hypotheses, only five achieved a level of significance. Three other hypotheses were very close (ranging from .06 to .18) to achieving significance. When results are not statistically significant, it means that the results are consistent with the null hypothesis (Ebanks, 2010). As a result, the study may have been underpowered, thereby causing numerous non-significant results for the remaining ten hypotheses. The initial power analysis required 70 participants, in turn; the study was short by six completed surveys. Nevertheless, the string of non-significant results for a majority of the hypotheses did not mean that this study was unable to contribute findings which enhanced the greater body of work in this area of study. In fact, the results of this study were consistent with previous studies on the NASM standards and applied music, which will be discussed later in this chapter.

**Results**

Research Question 1 dealt with the first concern: To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills is essential to the undergraduate percussion curriculum? Variables were represented by two survey
items each, specifically questions 1-6 and 26-31. Table 9 shows the mean, median, mode, standard deviation, and Cronbach’s Alpha for each of the variables. A 5-point Likert-type scale was used for each question. Possible selections were: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; and 5 = Strongly Agree. Instructor results were aggregated versus breaking down into independent variable categories.

Table 9

<table>
<thead>
<tr>
<th>NASM Knowledge and Skill</th>
<th>N</th>
<th>M</th>
<th>Mdn</th>
<th>Mode</th>
<th>sd</th>
<th>Cronbach α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>65</td>
<td>4.03</td>
<td>4.0</td>
<td>4.5</td>
<td>.819</td>
<td>.866</td>
</tr>
<tr>
<td>Musicianship skills and Analysis</td>
<td>65</td>
<td>4.14</td>
<td>4.0</td>
<td>4.0</td>
<td>.711</td>
<td>.705</td>
</tr>
<tr>
<td>Composition and Improvisation</td>
<td>65</td>
<td>3.81</td>
<td>4.0</td>
<td>4.0</td>
<td>.773</td>
<td>.757</td>
</tr>
<tr>
<td>History and Repertory</td>
<td>65</td>
<td>4.03</td>
<td>4.0</td>
<td>4.0</td>
<td>.764</td>
<td>.779</td>
</tr>
<tr>
<td>Technology</td>
<td>65</td>
<td>3.73</td>
<td>4.0</td>
<td>4.0</td>
<td>.927</td>
<td>.777</td>
</tr>
<tr>
<td>Synthesis</td>
<td>65</td>
<td>4.03</td>
<td>4.0</td>
<td>4.0</td>
<td>.811</td>
<td>.878</td>
</tr>
</tbody>
</table>

From the table above, data revealed that four of six NASM standards were in the Agree category with the other two ranging between Neutral and Agree. When referencing frequency distributions (Figures 2 - 7), at least two thirds of instructors Agree that each of the six standards are essential. The Composition and Improvisation standard
and the Technology standard were the least agreed upon standards when referencing frequency distributions and means.

Figure 2

*Instructors’ perceptions of the essential nature of the NASM performance standard*
Figure 3

Instructors’ perceptions of the essential nature of the NASM musicianship and analysis standard
Figure 4

Instructors’ perceptions of the essential nature of the composition and improvisation standard

![Histogram showing the distribution of instructors' perceptions.](image)
Figure 5

Instructors’ perceptions of the essential nature of the NASM history and repertory standard

![Histogram showing the distribution of instructors' perceptions of the essential nature of the NASM history and repertory standard. The x-axis represents the degree of essentiality, ranging from 1.00 to 5.00, with the y-axis representing frequency. The mean perception is 4.03, with a standard deviation of 0.765, based on 65 respondents.]
Figure 6

Instructors’ perceptions of the essential nature of the NASM technology standard
Figure 7

Instructors’ perceptions of the essential nature of the NASM synthesis standard
Research Question 2 dealt with the second concern: To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills exists in the current undergraduate percussion curriculum? Variables were represented by two survey items each, specifically questions 7-12 and 32-37. Table 10 shows the mean, median, mode, standard deviation, and Cronbach’s Alpha for each of the variables. A 5-point Likert-type scale was used for each question. Possible selections were: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; and 5 = Strongly Agree. Instructor results were aggregated versus breaking down into independent variable categories.

Table 10

<table>
<thead>
<tr>
<th>NASM Knowledge and Skill</th>
<th>N</th>
<th>M</th>
<th>Mdn</th>
<th>Mode</th>
<th>sd</th>
<th>Cronbach α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>64</td>
<td>4.02</td>
<td>4.0</td>
<td>4.0</td>
<td>.808</td>
<td>.797</td>
</tr>
<tr>
<td>Musicianship skills and Analysis</td>
<td>64</td>
<td>3.89</td>
<td>4.0</td>
<td>4.0</td>
<td>.779</td>
<td>.701</td>
</tr>
<tr>
<td>Composition and Improvisation</td>
<td>64</td>
<td>3.11</td>
<td>3.0</td>
<td>2.0/4.0a</td>
<td>.986</td>
<td>.804</td>
</tr>
<tr>
<td>History and Repertory</td>
<td>64</td>
<td>3.60</td>
<td>4.0</td>
<td>4.0</td>
<td>.888</td>
<td>.780</td>
</tr>
<tr>
<td>Technology</td>
<td>64</td>
<td>3.07</td>
<td>3.0</td>
<td>2.0/3.0a</td>
<td>.963</td>
<td>.780</td>
</tr>
<tr>
<td>Synthesis</td>
<td>64</td>
<td>3.56</td>
<td>3.75</td>
<td>4.0</td>
<td>.906</td>
<td>.760</td>
</tr>
</tbody>
</table>

a. Multiple modes exist.

From the table above, data revealed that one (Performance) of six NASM standards was in the Agree category with the other five ranging between Neutral and
Agree. When referencing frequency distributions (Figures 8 - 11), greater than half of the instructors Agree that four (Performance, Musicianship and Analysis, History and Repertory, and Synthesis) of six standards exist.

However, data were inconclusive when referencing the mean for the Composition and Improvisation standard and the Technology standard, which was due in part to a large sd. If the spread of values in the data set is large, then the mean is not as representative of the data as if the spread of data is small. This is because a large spread indicates that there are probably large differences between individual scores (Laerd, 2011). Moreover, a large sd may suggest a difference amongst group medians. In turn, the median is a much better measure of center (Saha, 2005). In addition, the Composition and Improvisation standard and the Technology standard were bimodal, suggesting a non-normal distribution as seen in Figures 12 and 13 below.

The non-probabilistic sampling method and small sample size increased this study’s propensity to violate normality (Laerd, 2011; Coladarci et al., 2008). With a Mdn = 3 for the Composition and Improvisation standard and Technology standard, half of all participants were above and half of all participants were below the Neutral selection on a Likert-type scale. The bimodal results indicated that over a third of instructors perceived that the two aforementioned standards did not exist.
Figure 8

Instructors’ perceptions that the NASM performance standard exists
Figure 9

Instructors’ perceptions that the NASM musicianship and analysis standard exists
Figure 10

Instructors’ perceptions that the NASM history and repertory standard exists
Figure 11

Instructors’ perceptions that the NASM synthesis exists
Figure 12

*Bimodal depiction of instructors’ perceptions of the NASM composition and improvisation standard*
Research Question 3 dealt with the third concern: To what extent do percussion instructors perceive funding, equipment, and facilities serve as barriers in developing students’ common body of knowledge and skills as specified by the NASM standards? Variables were represented by two survey items each, specifically questions 13-15 and 38-40. Table 11 shows the mean, median, mode, standard deviation, and Cronbach’s Alpha for each of the variables.
Table 11

*Aggregated instructors’ perceptions on potential barriers in developing students’ common body of knowledge and skills*

<table>
<thead>
<tr>
<th>Potential Barrier</th>
<th>N</th>
<th>M</th>
<th>Mdn</th>
<th>Mode</th>
<th>sd</th>
<th>Cronbach α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding</td>
<td>64</td>
<td>3.33</td>
<td>3.5</td>
<td>4.0</td>
<td>1.23</td>
<td>.858</td>
</tr>
<tr>
<td>Equipment</td>
<td>64</td>
<td>3.06</td>
<td>3.0</td>
<td>2.0</td>
<td>1.23</td>
<td>.881</td>
</tr>
<tr>
<td>Facilities</td>
<td>64</td>
<td>3.21</td>
<td>3.5</td>
<td>4.0</td>
<td>1.24</td>
<td>.861</td>
</tr>
</tbody>
</table>

From the table above and with reference to the mean, data revealed that responses were between Neutral and Agree for each barrier. However, data were inconclusive when referencing only the mean for each barrier. Aggregated data indicated a large sd for each barrier, meaning the median may be a more representative measure of the data. With medians of 3.0 and 3.5, half of all participants were above and half of all participants were below the Neutral selection on a Likert-type scale. In fact, this data set represented the largest sd spread in the study. With a Cronbach’s Alpha of over .85 for each standard, the paired questions were considered highly reliable. Moreover, there were significant results when using inferential statistics, thereby demonstrating differences based on demographics. This will be discussed in detail for Research Question 7.

Research Question 4 dealt with the fourth concern: To what extent do percussion instructors perceive that external factors such as administrators, colleagues, professional organizations, and professional development influence the development of the undergraduate percussion curricula in accordance with the NASM Common Body of
Knowledge and Skills? Variables were represented by two survey items each, specifically questions 16-25 and 41-50. Table 12 shows the mean, median, mode, standard deviation, and Cronbach’s Alpha for each of the variables.
Table 12

Aggregated percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance with the NASM Common Body of Knowledge and Skills

<table>
<thead>
<tr>
<th>External Factor</th>
<th>N</th>
<th>M</th>
<th>Mdn</th>
<th>Mode</th>
<th>sd</th>
<th>Cronbach α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrators</td>
<td>64</td>
<td>3.14</td>
<td>3.0</td>
<td>2.0</td>
<td>1.02</td>
<td>.821</td>
</tr>
<tr>
<td>Administrators Curriculum Review Process</td>
<td>64</td>
<td>2.97</td>
<td>3.0</td>
<td>4.0</td>
<td>1.00</td>
<td>.714</td>
</tr>
<tr>
<td>Administrators Direct NASM Compliance</td>
<td>64</td>
<td>3.01</td>
<td>3.0</td>
<td>4.0</td>
<td>.994</td>
<td>.776</td>
</tr>
<tr>
<td>Applied Instructors</td>
<td>64</td>
<td>2.92</td>
<td>3.0</td>
<td>2.0</td>
<td>.960</td>
<td>.760</td>
</tr>
<tr>
<td>Non-applied Instructors</td>
<td>64</td>
<td>2.50</td>
<td>2.5</td>
<td>2.0</td>
<td>.904</td>
<td>.646a</td>
</tr>
<tr>
<td>Professional Organizations</td>
<td>64</td>
<td>3.68</td>
<td>4.0</td>
<td>4.0</td>
<td>.957</td>
<td>.805</td>
</tr>
<tr>
<td>Professional Development Opportunities</td>
<td>64</td>
<td>3.47</td>
<td>4.0</td>
<td>4.0</td>
<td>.892</td>
<td>.744</td>
</tr>
<tr>
<td>Pedagogical Opportunities Offered</td>
<td>64</td>
<td>3.05</td>
<td>3.0</td>
<td>4.0</td>
<td>.984</td>
<td>.807</td>
</tr>
<tr>
<td>Curriculum Development Opportunities Offered</td>
<td>64</td>
<td>3.10</td>
<td>3.0</td>
<td>3.0</td>
<td>1.04</td>
<td>.839</td>
</tr>
<tr>
<td>Joint Pedagogical &amp; Curriculum Development Opportunities Offered</td>
<td>64</td>
<td>2.77</td>
<td>3.0</td>
<td>3.0</td>
<td>.867</td>
<td>.768</td>
</tr>
</tbody>
</table>

a. External Factor Cronbach α was < .70 suggested for this study.
From the table above and with reference to the mean, responses ranged between Neutral and Agree for six external factors and Disagree and Neutral for the other four. However, data indicated a large sd for each external factor, meaning the median may be a more representative measure of the data. With a Mdn of 2.5 or 3.0 for eight of the external factors, half of all participants were above and half of all participants were below the Neutral selection on the Likert-type scale.

The non-probabilistic sampling method and small sample size increased this study’s propensity to violate normality (Laerd, 2011; Coladarci et al., 2008). All but one of the proposed external factors had a Cronbach’s Alpha of over .70, suggesting that the paired questions were reliable. The Non-Applied Instructors Influence external factor had a low Cronbach’s Alpha, thereby making this external factor less reliable. Low reliability may have been due in part to a small sample size and the tendency for greater disparity in results with only two survey items per construct. Reliability is increased when a construct is measured by several items, although acceptable reliability can be achieved with minimal items per construct (Cozby, 2009).

Research Question 5 dealt with the fifth concern: Based on years of teaching, level of education, and teaching contract what differences exist in percussion instructors' perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum? Three hypotheses were analyzed in reference to Research Question 5:

**H10.** Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.
**H1a.** Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

Hypothesis number one used the Kruskal-Wallis test to determine if there was a significant difference between instructors’ perceptions regarding the essential nature of the NASM Common Body of Knowledge and Skills and Years of Teaching. Survey item number 51 offered participants four demographic groups (Table 6) from which to select. Participants were only allowed to make one selection, thereby maintaining mutual independence. This was the case for each hypothesis in the study. In addition, a negative skewness was achieved for each group. In turn, the primary assumptions of the Kruskal-Wallis test were met. Demographic groups were tested against survey items 1-6 and 26-31.

For the essential nature of the NASM Common Body of Knowledge and Skills, an alpha confidence level \( p < .05 \) was not achieved for instructors’ perceptions (aggregated). In turn, the null hypothesis was retained, though this does not mean that the null hypothesis is true. It is possible that this study was underpowered because each group had less than 30 participants. In fact, the additional nine non-significant findings may be due to an underpowered study. In non-normal data a level of significance is difficult to achieve with less than 30 subjects per grouping (Houser, 2007). Nonetheless, non-normal data can achieve significance with as many as participants \( n = 5 \) per category (Norusis, 2008). An individual item analysis indicated that the Technology standard was the closest to achieving significance with \( p = .058 \), meaning that a higher participation rate could have produced significant results.
H2₀. Based on level of education, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H2ₐ. Based on level of education, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

Hypothesis number two used the Kruskal-Wallis test to determine if there was a significant difference between instructors’ perceptions regarding the essential nature of the NASM Common Body of Knowledge and Skills and highest Level of Education completed. Survey item number 52 offered participants three demographic groups (Table 7) from which to select. In addition, a negative skewness was achieved for each group, thereby meeting the primary assumptions of the Kruskal-Wallis test. Demographic groups were tested against survey items 1-6 and 26-31.

For the essential nature of the NASM Common Body of Knowledge and Skills, an alpha confidence level ($p < .05$) was not achieved for instructors’ perceptions (aggregated). In turn, the null hypothesis was retained, though this does not mean that the null hypothesis is true. Reference Hypothesis number one for underpowered explanation.

H3₀. Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.
H3a. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

Hypothesis number three used the Kruskal-Wallis test to determine if there was a significant difference of instructors’ perceptions regarding the essential nature of the NASM Common Body of Knowledge and Skills and Teaching Contract. Survey item number 53 offered participants four demographic groups (Table 8) from which to select. In addition, a negative skewness was achieved for each group, thereby meeting the primary assumptions of the Kruskal-Wallis. Demographic groups were tested against survey items 1-6 and 26-31.

For the essential nature of the NASM Common Body of Knowledge and Skills, an alpha confidence level ($p < .05$) was not achieved for instructors’ perceptions (aggregated). In turn, the null hypothesis was retained, though this does not mean that the null hypothesis is true. Reference Hypothesis number one for underpowered explanation.

Research Question 6 dealt with the sixth concern: Based on years of teaching, teaching contract, and level of education, what differences are there in percussion instructors' perceptions that the NASM Common Body of Knowledge and Skills exists in the current undergraduate percussion curriculum? Three hypotheses were analyzed in reference to Research Question 6:

H4b. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.
**H4a.** Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

Hypothesis number four used the Kruskal-Wallis test to determine if there was a significant difference between instructors’ perceptions regarding the existence of the NASM Common Body of Knowledge and Skills in the undergraduate applied percussion curriculum and years of teaching. Survey item number 51 offered participants four demographic groups (Table 6) from which to select. In addition, a negative skewness was achieved for each group, thereby meeting the primary assumptions of the Kruskal-Wallis test. The aforementioned groups from Hypothesis number one were tested against survey items 7-12 and 32-37.

An alpha confidence level of $p = .042$ was achieved. In turn, the null hypothesis was rejected. As seen in Table 10, an individual item analysis was accomplished to ascertain which standards achieved a level of significance. In this instance, the Composition and Improvisation Exists and Technology Exists were significant. The Games-Howell *post hoc* test demonstrated a significant result ($p = .043$) between aggregated means for instructors with > 30 Years of Teaching ($M = 3.72$) and those with 0-9 Years of Teaching ($M = 3.24$).

In addition, frequency distributions (Figures 14 and 15) support the significant result. Figure 14 indicated that over 50% of responses for instructors with > 30 Years of Teaching ranged between Agree and Strongly Agree for the existence of the Composition and Improvisation standard. Only 9% of responses for instructors with 0-9 Years of Teaching ranged between Agree and Strongly Agree on the same standard. Figure 15
indicated that over 40% of responses for instructors with > 30 Years of Teaching ranged between Agree and Strongly Agree for the existence of the Technology standard. Only 9% of responses for instructors with 0-9 Years of Teaching ranged between Agree and Strongly Agree on the same standard.

Table 13

<table>
<thead>
<tr>
<th>NASM Knowledge and Skill</th>
<th>N</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>64</td>
<td>3</td>
<td>.282</td>
</tr>
<tr>
<td>Musicianship skills and Analysis</td>
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<td>3</td>
<td>.106</td>
</tr>
<tr>
<td>Composition and Improvisation</td>
<td>64</td>
<td>3</td>
<td>.014*</td>
</tr>
<tr>
<td>History and Repertory</td>
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<td>3</td>
<td>.076</td>
</tr>
<tr>
<td>Technology</td>
<td>64</td>
<td>3</td>
<td>.021*</td>
</tr>
<tr>
<td>Synthesis</td>
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<td>3</td>
<td>.498</td>
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</tbody>
</table>

*denotes significant difference at $p < .05$
Figure 14

*Frequency distribution for years of teaching and the existence of the NASM composition and improvisation standard*
Figure 15

*Frequency distribution for years of teaching and the existence of the NASM technology standard*

H5<sub>0</sub>. Based on level of education, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H5<sub>a</sub>. Based on level of education, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

Hypothesis number five used the Kruskal-Wallis test to determine if there was a significant difference between instructors’ perceptions regarding the existence of the NASM Common Body of Knowledge and Skills in the undergraduate applied percussion
curriculum and highest Level of Education completed. Survey item number 52 offered participants three demographic groups (Table 7) from which to select. In addition, a negative skewness was achieved for two of the three groups, thereby generally meeting assumptions for the Kruskal-Wallis test. The Bachelor’s group had a slight positive skew, possibly attributed to an underpowered grouping (n = 5). The aforementioned groups from Hypothesis number two were tested against survey items 7-12 and 32-37.

An alpha confidence level (p < .05) was not achieved for instructors’ perceptions (aggregated) on the existence of the NASM Common Body of Knowledge and Skills. In turn, the null hypothesis was retained, though this does not mean that the null hypothesis is true. Reference Hypothesis number one for underpowered explanation.

**H6<sub>0</sub>**. Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

**H6<sub>a</sub>**. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

Hypothesis number six used the Kruskal-Wallis test to determine if there was a significant difference of instructors’ perceptions regarding the existence of the NASM Common Body of Knowledge and Skills and Teaching Contract. Survey item number 53 offered participants four demographic groups (Table 8) from which to select. In addition, a negative skewness was achieved for three of the four groups, thereby generally meeting assumptions for the Kruskal-Wallis test. The part-time contract group had a slight positive skew, possibly attributed to an underpowered grouping (n = 10). The
aforementioned groups from Hypothesis number three were tested against survey items 7-12 and 32-37.

An alpha confidence level of $p = .030$ was achieved. In turn, the null hypothesis was rejected. As seen in Table 14, an individual item analysis was accomplished to ascertain which standards achieved a level of significance. In this instance, the Composition and Improvisation Exists and Technology Exists were significant. The Performance skill and the Musicianship Skills and Analysis were very close to reaching significance, meaning that a higher participation rate could have produced significant results. The Games-Howell post hoc test demonstrated a significant result ($p = .040$) between aggregated means for tenured instructors ($M = 3.77$) and full-time contract instructors ($M = 3.00$).

In addition, frequency distributions (Figures 16 and 17) support the significant result. Figure 16 indicated that 54% of tenured instructors’ responses ranged between Agree and Strongly Agree for the existence of the Composition and Improvisation standard. None of the full-time contract instructors’ responses ranged between Agree and Strongly Agree on the same standard. Figure 17 indicated that 39% of tenured instructors’ responses ranged between Agree and Strongly Agree for the existence of the Technology standard. None of the full-time contract instructors’ responses ranged between Agree and Strongly Agree on the same standard.
Based on teaching contract, applied percussion instructors perception of the existence of the NASM Common Body of Knowledge and Skills in the undergraduate applied percussion curriculum

<table>
<thead>
<tr>
<th>NASM Knowledge and Skill</th>
<th>N</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
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<tr>
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<td>.050</td>
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<td>Musicianship skills and Analysis</td>
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<td>.067</td>
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<td>Composition and Improvisation</td>
<td>64</td>
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<td>.021*</td>
</tr>
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<td>History and Repertory</td>
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<td>Technology</td>
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<td>3</td>
<td>.038*</td>
</tr>
<tr>
<td>Synthesis</td>
<td>64</td>
<td>3</td>
<td>.218</td>
</tr>
</tbody>
</table>

*denotes significant difference at $p < .05$
Figure 16

Frequency distribution for teaching contract and the existence of the NASM composition and improvisation standard.
Research Question 7 dealt with the seventh concern: Based on years of teaching, level of education, and teaching contract what differences exist in percussion instructors’ perceptions that barriers (finances, equipment, and facilities) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills? Three hypotheses were analyzed in reference to Research Question 7:

**H7₀.** Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that barriers (finances, equipment, and facilities) influence the
development of undergraduate percussion curricula which is in accordance to the NASM
Common Body of Knowledge and Skills.

**H7**. Based on years of teaching, there is a significant difference in percussion
instructors’ perceptions that barriers (finances, equipment, and facilities) influence the
development of undergraduate percussion curricula which is in accordance to the NASM
Common Body of Knowledge and Skills.

Hypothesis number seven used the Kruskal-Wallis test to determine if there was a
significant difference between instructors’ perceptions regarding barriers (funding,
equipment, and facilities) to the development of the NASM Common Body of
Knowledge and Skills and Years of Teaching. Survey item number 51 offered
participants four demographic groups (Table 6) from which to select. In addition, a
negative skewness was achieved for three of the four groups, thereby generally meeting
assumptions for the Kruskal-Wallis test. The grouping for 20-29 Years of Teaching
contract had a slight positive skew, possibly attributed to an underpowered grouping ($n =
11$). The aforementioned groups from Hypothesis number one were tested against survey
items 13-15 and 38-40.

An alpha confidence level ($p < .05$) was not achieved for the potential barriers
(aggregated). In turn, the null hypothesis was retained, though this does not mean that
the null hypothesis is true. Reference Hypothesis number one for underpowered
explanation.

**H8**. Based on level of education, there is no significant difference in percussion
instructors’ perceptions that barriers influence the development of undergraduate
percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H8a.** Based on level of education, there is a significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

Hypothesis number eight used the Kruskal-Wallis test to determine if there was a significant difference of instructors’ perceptions regarding barriers (funding, equipment, and facilities) to the development of the NASM Common Body of Knowledge and Skills and highest Level of Education completed. Survey item number 52 offered participants three demographic groups (Table 7) from which to select. In addition, a negative skewness was achieved for two of the three groups, thereby generally meeting assumptions for the Kruskal-Wallis test. The Bachelor’s group had a slight positive skew, possibly attributed to an underpowered grouping (n = 5). The aforementioned groups from Hypothesis number two were tested against survey items 1-6 and 26-31.

An alpha confidence level (p < .05) was not achieved for the potential barriers (aggregated). In turn, the null hypothesis was retained, though this does not mean that the null hypothesis is true. Reference Hypothesis number one for underpowered explanation.

**H9b.** Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.
H9. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

Hypothesis number nine used the Kruskal-Wallis test to determine if there was a significant difference of instructors’ perceptions regarding barriers (funding, equipment, and facilities) to the development of the NASM Common Body of Knowledge and Skills and type of teaching contract. Survey item number 53 offered participants four demographic groups (Table 8) from which to select. In addition, a negative skewness was achieved for three of the four groups, thereby generally meeting assumptions for the Kruskal-Wallis test. The Part-time Contract group had a slight positive skew, possibly attributed to an underpowered grouping (n = 10). The aforementioned groups from Hypothesis number three were tested against survey items 13-15 and 38-40.

An alpha confidence level (\(p = .001\)) was achieved for the aggregated data concerning barriers to the development of applied percussion curricula, which resulted in a rejection of the null hypothesis. An individual item analysis was accomplished to ascertain which barriers achieved a level of significance. In this instance, all three were significant. As seen in Table 15 below, the Games-Howell post hoc test demonstrated a significant result for three aggregated pairings with full-time contract instructors achieving significant results in conjunction with the other three teaching contracts. Full-time contract instructors agreed more strongly (\(M = 4.35\)) that barriers influenced the development of applied percussion curricula. Means for the other three groups were: tenured (\(M = 2.90\)), part-time contract (\(M = 2.67\)), and adjunct (\(M = 3.40\)).
In addition, frequency distributions (Figure 18) support the significant result.

Figure 18 indicated that 100% of full-time contract instructors’ responses ranged between Agree and Strongly Agree for the influence of barriers in the development of applied percussion curricula. However, Agree to Strongly Agree responses for adjunct (35%), part-time contract (20%), and tenured (32%) instructors were significantly lower.

Table 15

<table>
<thead>
<tr>
<th>Teaching Contract (I)</th>
<th>Teaching Contract (J)</th>
<th>Mean Difference (I-J)</th>
<th>Standard Error</th>
<th>Sig.</th>
</tr>
</thead>
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<tr>
<td>Tenure</td>
<td>Full-time</td>
<td>-1.44*</td>
<td>.240</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Part-time</td>
<td>.238</td>
<td>.332</td>
<td>.890</td>
</tr>
<tr>
<td></td>
<td>Adjunct</td>
<td>-.497</td>
<td>.323</td>
<td>.427</td>
</tr>
<tr>
<td>Full-time</td>
<td>Tenure</td>
<td>1.44*</td>
<td>.240</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Part-time</td>
<td>1.68*</td>
<td>.287</td>
<td>.000</td>
</tr>
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<td>.277</td>
<td>.012</td>
</tr>
<tr>
<td>Part-time</td>
<td>Tenure</td>
<td>-.238</td>
<td>.332</td>
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</tr>
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<td></td>
<td>Full-time</td>
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<td>Adjunct</td>
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<td>.427</td>
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<tr>
<td></td>
<td>Full-time</td>
<td>-.949*</td>
<td>.277</td>
<td>.012</td>
</tr>
<tr>
<td></td>
<td>Part-time</td>
<td>.735</td>
<td>.360</td>
<td>.203</td>
</tr>
</tbody>
</table>
Figure 18

*Frequency distribution for barriers and teaching contract*

Research Question 8 dealt with the eighth concern: Based on years of teaching, level of education, and teaching contract what differences exist in percussion instructors’ perceptions that external factors (administrators, colleagues, professional development, and professional organizations) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills? Three hypotheses were analyzed in reference to Research Question 8:

**H10**. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that external factors (administrators, colleagues, professional development, and professional organizations) influence the development of
undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H10a.** Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that external factors (administrators, colleagues, professional development, and professional organizations) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

Based on years of teaching, hypothesis number ten used the Kruskal-Wallis test to determine if there was a significant difference in instructors’ perceptions regarding external factors and the influence of the NASM Common Body of Knowledge and Skills in the undergraduate applied percussion curriculum. Survey item number 51 offered participants three demographic groups (Table 6) from which to select. In addition, a positive skewness was achieved for three of the four groups, thereby generally meeting assumptions for the Kruskal-Wallis test. The grouping for 0-9 Years of Teaching ($n = 22$) had a slight negative skew. The aforementioned groups from Hypothesis number one were tested against survey items 16-25 and 41-50.

An alpha confidence level ($p < .05$) was not achieved for the aggregated external factors data. In turn, the null hypothesis was retained, though this does not mean that the null hypothesis is true. Reference Hypothesis number one for underpowered explanation.

**H110.** Based on level of education, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.
**H11a.** Based on level of education, there is a significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

Based on highest level of education completed, hypothesis number eleven used the Kruskal-Wallis test to determine if there was a significant difference in instructors’ perceptions regarding external factors and the influence of the NASM Common Body of Knowledge and Skills in the undergraduate applied percussion curriculum. Survey item number 52 offered participants three demographic groups (Table 7) from which to select. In addition, a negative skewness was achieved for each group, thereby meeting the primary assumptions of the Kruskal-Wallis test. The aforementioned groups from Hypothesis number two were tested against survey items 16-25 and 41-50.

An alpha confidence level ($p < .05$) was not achieved for the aggregated external factors data. In turn, the null hypothesis was retained, though this does not mean that the null hypothesis is true. Reference Hypothesis number one for underpowered explanation.

**H12b.** Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H12a.** Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.
Based on teaching contract, hypothesis number twelve used the Kruskal-Wallis test to determine if there was a significant difference of instructors’ perceptions regarding external factors and the influence of the NASM Common Body of Knowledge and Skills in the undergraduate applied percussion curriculum. Survey item number 53 offered participants three demographic groups (Table 8) from which to select. In addition, a positive skewness was achieved for three of the four groups, thereby generally meeting assumptions for the Kruskal-Wallis test. The adjunct group had a slight negative skew, possibly attributed to an underpowered grouping ($n = 17$). The aforementioned groups from Hypothesis number three were tested against survey items 16-25 and 41-50.

An alpha confidence level ($p < .05$) was not achieved for the aggregated external factors data. In turn, the null hypothesis was retained, though this does not mean that the null hypothesis is true. Reference Hypothesis number one for underpowered explanation. An individual item analysis indicated that Administrator Influence was the closest to achieving significance with $p = .068$, meaning that a higher participation rate could have produced significant results.

Research Question 9 dealt with the ninth concern: Is there a relationship between instructors’ perceptions in barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula? One hypothesis was analyzed in reference to Research Question 9:

$H_{130}$: There is no significant relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.
H13a: There is a significant relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

Hypothesis number thirteen used the Spearman Rank Order Correlation Coefficient ($r_s$), the non-parametric version of the Pearson Product Moment Correlation. The $r_s$ is the measure of strength and direction of association that exists between two variables (Laerd, 2011; Norusis, 2008). Assumptions for $r_s$ were met, because variables were measured on ordinal, interval, or ratio scales and possess a monotonic relationship (Laerd, 2011). The same statistical assumptions were applied to Hypotheses 14 and 15. Data for survey item numbers 7-12 and 32-37 (Existence) and 13-15 and 38-40 (Barriers) were categorically aggregated. An alpha confidence level ($p < .05$) was not achieved for the aggregated data; $p = .056$ was achieved. In turn, the null hypothesis was retained, though this does not mean that the null hypothesis is true. Reference Hypothesis number one for underpowered explanation. A higher participation rate may have achieved a level of significance for this hypothesis.

Research Question 10 dealt with the tenth concern: Is there a relationship between instructors’ perceptions about external factors and the existence of the NASM standards in applied percussion curricula? One hypothesis was analyzed in reference to Research Question 10:

H14b: There is no significant relationship between instructors’ perceptions that external factors influence the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.
H14a: There is a significant relationship between instructors’ perceptions that external factors influence the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

Hypothesis number fourteen used the Spearman Rank Order Correlation Coefficient ($r_s$), the non-parametric version of the Pearson Product Moment Correlation. Reference Hypothesis number 13 for statistical assumptions. Data for survey item numbers 7-12 and 32-37 (Existence) and 16-25 and 41-50 (External Factors) were categorically aggregated. An alpha confidence level ($p < .05$) was achieved for the aggregated data, $p = .006$ and a medium $r_s$ of .339. Medium association is between +/- .3 to +/- .5 (Laerd, 2011). In turn, the null hypothesis was rejected with a positive association between external factors and the existence of the NASM standards in the current applied percussion curriculum.

Research Question 11 dealt with the eleventh concern: Is there a relationship between instructors’ perceptions of the essential nature as compared to the existence of the NASM standards in applied percussion curricula? One hypothesis was analyzed in reference to Research Question 11:

H15o: There is no significant relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

H15a: There is a significant relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and
instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

Hypothesis number fifteen used the Spearman Rank Order Correlation Coefficient ($r_s$), the non-parametric version of the Pearson Product Moment Correlation. Reference Hypothesis number 13 for statistical assumptions. Data for survey item numbers 1-6 and 26-31 (Essential) and 7-12 and 32-37 (Existence) were categorically aggregated. An alpha confidence level ($p < .05$) was achieved for the aggregated data, $p = .000$ with a large $r_s$ of .577. Large association is considered $> +/- .5$ to $+/- 1.0$ (Laerd, 2011). In turn, the null hypothesis was rejected with a positive association between essential nature and the existence of the NASM standards in the current applied percussion curriculum.

**Evaluation of Findings**

When referencing the mean, the primary findings indicated instructors agreed that four of six NASM standards were essential to the development of undergraduate applied percussion curricula. Responses ranged between Neutral and Agree for the other two standards (Composition and Improvisation Standard and Technology Standard). Frequency distributions (Figures 2 - 7) indicated that two thirds of the responses were in the Agree or Strongly Agree category for each of the six standards. This confirms the findings for the four standards in the Agree category with reference to the mean and a trend towards Agree for the other two. As a result, it is reasonable to assert that instructors perceive the standards to be essential. The main difference for the two standards not achieving a mean in the Agree category, although close, was that fewer instructors responded Strongly Agree and more responded Neutral when compared to the other four standards, thus generating a lesser mean. In addition, a Cronbach’s Alpha
above .70 was achieved for each standard. A Cronbach’s Alpha of .70 is considered acceptable in terms of reliability (Gliem & Gliem, 2003).

Data also revealed that one (Performance) of six NASM standards was in the Agree category for the existence of NASM standards. The other five ranged between Neutral and Agree when referencing the mean (Tables 9 and 10). Frequency distributions indicated (Figures 8 - 11) that greater than half of the instructors agreed that four (Performance, Musicianship and Analysis, History and Repertory, and Synthesis) of six standards exist. In turn, this demonstrates a slight inconsistency when comparing the mean and frequency distributions. Although greater than half of all instructors agreed that these four standards exist when using frequency distributions, all but the Performance standard had a 22 to 30 percent reduction in Agree and Strongly Agree responses when compared to responses for the essential nature of standards. In turn, instructors’ perceptions on the existence of standards are less than perceptions regarding the essential nature of standards.

Results from the Kruskal-Wallis test indicated no significant difference was achieved between the three independent variables (Years of Teaching, Level of Education, and Teaching Contract) in regards to the essential nature of standards, but significance was achieved for Hypotheses 4 (Years of Teaching) and Hypothesis 6 (Teaching Contract) with reference to the existence of the standards. Frequency distributions (Figures 14 - 17) support the significant results. It appears that instructors with > 30 Years of Teaching \( (M = 3.72) \) agreed more strongly than instructors with 0-9 \( (M = 3.24) \) in terms of the existence of the NASM standards. Similarly, tenured instructors \( (M = 3.77) \) agreed more strongly than full-time contract instructors \( (M = 3.00) \).
in terms of the existence of the NASM standards. A level of significance was achieved for Hypothesis 15, thereby indicating a strong positive association \((r_s = .577)\) between instructors’ perceptions of the essential nature and existence of the NASM standards.

A secondary aspect was to examine potential barriers and external factors which may affect the existence of the NASM standards. Aggregated data (descriptive statistics) indicated that responses were between Neutral and Agree for each barrier. Data were inconclusive when referencing the mean alone for each barrier, which was due in part to a large \(sd\). Nonetheless, a significant result was achieved for the Teaching Contract independent variable through a Kruskal-Wallis test. Frequency distributions (Figure 18) support the significant results. It appears that full-time contract instructors agreed more strongly \((M = 4.35)\) that barriers influenced the development of applied percussion curricula. Means for the other three groups were: tenured \((M = 2.90)\), part-time contract \((M = 2.67)\), and adjunct \((M = 3.40)\). No significance was achieved in terms of strength of association.

Aggregated data (descriptive statistics) indicated that responses ranged between Neutral and Agree for six external factors and Disagree and Neutral for the other four. Professional Organizations and Professional Development Opportunities were the most agreed upon external factors with the influence of applied instructors, non-applied instructors, and joint professional development opportunities as the least agreed upon factors (Table 12). Based on results from the Kruskal-Wallis test, no significance was achieved between the three independent variables (Years of Teaching, Level of Education, and Teaching Contract) when compared to the proposed external factors. Nevertheless, a significant result \((r_s = .339)\) was achieved when considering strength of
association between external factors and the existence of the NASM standards. Although instructors’ responses primarily ranged between Neutral and Agree, there was a positive relationship with the existence of the standards.

In terms of the theoretical framework which guided this study, there were mixed data on Shulman’s ideal of synthesizing the three domains of content knowledge: subject matter, pedagogical, and curricular. For this study, instructors’ responses ranged from Neutral and Agree for professional development opportunities and professional organizations (Table 12). In addition, instructors’ responses ranged from Neutral and Agree on the notion that ample professional development opportunities were offered for pedagogical and curricular development. However, responses ranged from Disagree and Neutral for having adequate joint pedagogical and curricular opportunities (Table 12). Thus, it may be reasonable to propose that the existence of standards is related to the quality of professional development an instructor receives.

When compared to similar studies, Johnson (2009) and Rege (2008) claimed that both music students (some of whom are applied percussion students) and faculty did not receive the requisite subject matter, pedagogical or curricular content opportunities as suggested by the NASM for Music Technology or Music Theory. Wexler (2008) added that applied music instructors were primarily focused on the technical and artistic aspects of playing an instrument, but mentioned very little in terms of the pedagogical or curricular aspects of teaching applied music. Although there were no data from previous studies, including percussion, which supported the existence of ample pedagogical and curricular development opportunities, data from this study were inconclusive on whether
instructors interweaved the content knowledge domains as proposed by Hofer and Swan (2009) and Shulman (1986).

Nonetheless, if instructors felt strongly about professional development opportunities, data would likely have reflected a more conclusive outlook. With that in mind, a neutral mindset suggests the interweaving of content knowledge is questionable. However, professional development may be hidden within the influence of professional organizations because the Percussive Arts Society International Convention and National Conference on Percussion Pedagogy offer annual seminars on applied curriculum issues.

Although it was important to examine factors that influence curriculum development, the end result (existence of standards) is of primary interest. As for specific NASM Common Body of Knowledge and Skills, data from this study indicated a neutral opinion on the existence of the Technology and Composition and Improvisation standards. However, the bimodal nature of the data was a concern (Table 10; Figures 2 and 3). This is due to the fact there were a large number of instructors who disagreed with the existence of Technology ($n = 23; 36\%, M = 3.07$) skills in the applied percussion curriculum. In comparison to previous studies, Rege (2008) and Johnson (2009) indicated that schools of music were not in compliance with the same two NASM standards. Ruch (2009) affirmed the lack of the technology standard as well, but in regards to applied vocal. More specifically, a previous study on applied percussion curricula indicated that 59% of percussion instructors had little to no experience in teaching electronic percussion (technology). Moreover, out of 10 possible areas of foci, 73% of the same instructors indicated that it was the least important component as it relates to the current curriculum. Sixty-eight percent indicated that it was the least ideal
for the curriculum in comparison to the other areas (Fisher, 2004). Although all of the
studies were not in the field of applied percussion, the purpose was similar: to analyze
the influence of the NASM standards on the development of curricula.

In addition, the existence of the Composition and Improvisation standard ($M = 3.11$; Mode = 2 and 4) standard was questionable in the current applied percussion
curriculum. According to aggregated descriptive statistics, it was the second lowest
ranked standard that existed in the curriculum amongst applied percussion instructors
with 34% of instructors ($n = 22$) selecting Disagree. In comparison to a similar study,
Johnson (2009) indicated that the NASM improvisation standard was non-existent in the
music theory curriculum. In fact, it was rated the lowest of importance by participants in
her study as compared to the other common body of knowledge and skills.

In reference to norms in education that affect curriculum development, applied
percussion instructors’ responses ranged from Disagree and Neutral on the aspect of
developing curricula in isolation. For the most part, aggregated data (descriptive
statistics) from this study had means and medians of 3.0 for external factors that
influenced curriculum development. However, applied percussion instructors’ responses
ranged between Disagree and Neutral for non-applied instructors ($M = 2.5$; $Mdn = 2.5$),
applied instructors ($M = 2.92$; $Mdn = 3.0$), and administrators ($M = 2.97$; $Mdn = 3.0$).
Thus, it is possible that these three external factors had limited involvement during the
curriculum development process.

As stated previously, there is a tendency for music instructors to exist in isolation
from other school of music instructors and administrators when devising curricula
(Fredrickson, 2007; Gaunt, 2007; Johnson, 2009; Wexler, 2009). In fact, one study
suggested that 90% curricular decisions were made by faculty without regard to administrators, thereby suggesting minimal oversight (Rege, 2008). To that end, there was no evidence to discredit previous results that applied instructors developed curricula in isolation, nor was there data to fully solidify previous research.

In conjunction with NASM studies which used inferential statistics, it was interesting to note that there was evidence that applied music instructors did not differ much in attitudes, strategies, and goals (Wexler, 2009). Regardless of demographic group, data indicated (via the Kruskal-Wallis test) instructors agreed that four of six NASM standards were essential when referencing the mean, but two thirds of instructors agreed when using frequency distributions (see Hypotheses 1, 2, and 3). Ruch’s (2009) study on applied vocal curricula and the NASM educational experiences, which used random sampling and the One-Way Analysis of Variance (ANOVA), achieved similar results. However, both studies indicated greater agreement on the essential nature of the standards versus the existence of the standards (see Tables 9 and 10). Both studies achieved significant differences on the existence of NASM standards in reference to Teaching Contract. Tenured instructors agreed more strongly than full-time contract instructors on the existence of certain standards.

Although this study’s aggregated data (descriptive statistics) for potential barriers to curriculum development was between Neutral to Agree (see Table 11), a level of significance was achieved via the Kruskal-Wallis test for the Teaching Contract independent variable. The significant result was supported by frequency distributions (Figure 18). Full-time contract instructors agreed more strongly that barriers influenced the development of applied percussion curricula as compared to the other three groups.
(Table 15). This concern was confirmed by previous studies, specifically Rege (2008). Although her study was in reference to participants’ disagreement with adequate funding for music technology equipment, the concern and potential effects - as expressed previously - were similar. Moreover, she did not distinguish between demographic groups; she only used descriptive statistics and qualitative data. In turn, her results were based upon a broad base of opinions without regard to demographic groups. Nonetheless, there was common ground with previous research in that barriers influenced curriculum development.

One concern about this study’s data was that only five of fifteen hypotheses achieved a level of significance. This seems to be the track record for recent studies in applied music. For example, Ruch (2009) and Wexler (2008) had many hypotheses that did not achieve a level of significance. Non-significant results for this study may have been due to an underpowered study. The power analysis accomplished prior to the data collection phase provided evidence that this study was short by approximately 6 completed surveys. Hypothesis 1 ($p = .058$), Hypothesis 13 ($p = .056$), and Hypothesis 12 ($p = .068$) came very close to achieving significance, meaning that significant results may have been achieved with additional participation. In reference to Ruch and Wexler, both of their studies were not underpowered. In turn, the lack of significant results for this study may lend credence to Wexler’s opinion that instructors do not vary much in attitudes, strategies, and goals.

Although significant findings were not achieved for a majority of hypotheses, this study contains data that has never been accomplished in research on the development of applied percussion curricula with reference to the NASM standards. In addition,
evaluation of applied music (private instruction) in higher education settings has been
under-investigated (Bergee, 2003; Kennell, 2002). Therefore, this data will add to the
body of research not only in applied percussion, but applied music as a whole. Data went
beyond the customary taxonomy of items within applied percussion curricula studies as
seen in Nave (2001) and Fisher (2004) and other NASM related studies that used only
descriptive statistics, such as Johnson (2009) and Rege (2008). This study gauged
instructors’ perceptions of the NASM standards, potential barriers, and the influence of
external factors on the development of applied percussion curricula via descriptive and
inferential statistics. As a result, data indicated that the NASM standards do influence
curriculum development.

**Summary**

In summary, this study used descriptive statistics along with the non-parametric
Kruskal-Wallis test and the Spearman Rank Order Correlation Coefficient to analyze
whether the NASM standards influenced the development of applied percussion
curricula. When referencing the mean, the primary findings indicated that applied
percussion instructors agreed that four of six the NASM standards were essential to the
development of undergraduate applied percussion curricula with responses ranging
between Neutral and Agree for the other two. Frequency distributions (Figures 2 - 7)
indicated that two thirds of the responses were in the Agree or Strongly Agree category
for each of the six standards. As a result, it is reasonable to assert that instructors
perceive the standards to be essential.

In addition, data revealed that one of six NASM standards was in the Agree
category for the existence of NASM standards with the other five ranging between
Neutral and Agree when referencing the mean (Tables 9 and 10). Frequency distributions indicated (Figures 8 - 11) that half of the instructors agreed that four (Performance, Musicianship and Analysis, History and Repertory, and Synthesis) of six standards exist. Although greater than half of all instructors agreed that these four standards exist, all but the Performance standard had a 22 to 30 percent reduction in Agree and Strongly Agree responses when compared to responses for the essential nature of standards. In turn, instructors’ perceptions on the existence of standards are less than perceptions regarding the essential nature of standards. Finally, there was a strong positive association between the essential nature and existence of standards.

A secondary aspect was to examine potential barriers and external factors which may affect the existence of the NASM standards. Aggregated data (descriptive statistics) indicated that responses were between Neutral and Agree for each barrier. However, a significant result was achieved for the Teaching Contract independent variable, with full-time contract instructors agreeing more strongly that barriers influenced the development of applied percussion curricula as compared to the other three groups. Frequency distributions supported this assertion (Figure 18).

Thirdly, aggregated data (descriptive statistics) indicated that responses ranged between Neutral and Agree for six external factors and Disagree and Neutral for the other four. Professional Organizations and Professional Development Opportunities were the most agreed upon external factors with the influence of applied instructors, non-applied instructors, and joint professional development opportunities as the least agreed upon factors (Table 12). In addition, data indicated that percussion instructors may not receive the professional development necessary to meet Shulman’s ideal of synthesizing content
knowledge, thereby potentially limiting the existence of the NASM standards in applied
percussion curricula. Finally, data indicated the possibility of applied percussion
instructors developing curricula in isolation from other school of music faculty and there
were neutral feelings toward administrative oversight and guidance.
Chapter 5: Implications, Recommendations, and Conclusions

This chapter includes an overview of the problem statement, purpose, method, limitations and delimitations, ethical dimensions, recommendations, and conclusions. Although there were no previous studies on the influence of the NASM standards on the development of applied percussion curricula, research from other areas in undergraduate music suggested that schools of music were not in compliance with the NASM language, specifically in the areas of applied vocal, music theory, music education, and music technology. In addition, research suggested that the apparent shortfall was due in part to an inability to synthesize the three domains of content knowledge. The three domains of content knowledge are: subject matter content knowledge, pedagogical content knowledge, and curricular content knowledge (Shulman, 1986; Wexler, 2009). Previous research also indicated that the inability to synthesize was due to a tendency for music instructors to develop curricula in isolation from other school of music instructors and administrators (Fredrickson, 2007; Gaunt, 2007; Johnson, 2009; Wexler, 2009). To that end, there were multiple factors to consider when evaluating the findings from this research.

Unfortunately, there have been few comprehensive attempts to examine factors that influence the development of applied percussion curricula development (Fisher, 2004; Nave, 2001). As stated previously, existing research in collegiate music programs indicated episodes of non-compliance with the NASM standards. The problem is percussion programs may not meet the intent of the NASM standards, though the degree to which each standard is met is determined by specialization and individual need. Neglecting to meet standards could prove problematic since students may lack requisite
skills to succeed in the teaching and performance environment (Rege, 2008; Ruch, 2009). In addition, determining the influence of the NASM standards is important since willful neglect could be indicative of institutional norms that are contrary to standards based initiatives and whether schools of music value the NASM framework.

The purpose of this quantitative research study was to determine if the NASM standards influenced the development of undergraduate applied percussion curricula. Additional purposes were to determine if barriers and external factors affect the implementation of standards, and if barriers, external factors, and/or the essential nature of standards were associated with the existence of the NASM standards in current applied percussion curricula. For this study, barriers were finances, equipment, and facilities. External factors were administrators, colleagues, professional organizations, and professional development opportunities. Specifically, the research focused on whether applied percussion curricula addressed the NASM Common Body of Knowledge and Skills and degree requirements as outlined in Section VIII (All Professional Baccalaureate Degrees in Music and All Undergraduate Degrees Leading to Teacher Certification) in the *NASM 2009-2010 Handbook* (NASM, 2009). These included (a) performance, (b) musicianship skills and analysis, (c) composition and improvisation, (d) history and repertory, (e) technology, and (f) synthesis (NASM, 2009).

A non-experimental quantitative design was optimal for the proposed research. The population sample was non-probabilistic, purposive, and heterogeneous, consisting of 350 undergraduate percussion instructors from 183 baccalaureate granting institutions in NASM Regions 6 and 7. In addition, this study investigated four dependent variables based on respondents’ perceptions and three independent variables based on demographic
categories (Years of Teaching, Level of Education, and Teaching Contract). Dependent variables, based on descriptive statistics, included the extent to which respondents agreed (perceptions) that the NASM standards were essential for the undergraduate curriculum; the extent to which respondents agreed (perceptions) that NASM standards existed in the undergraduate curriculum; the extent to which respondents agreed (perceptions) that there were barriers to curriculum development; and the extent to which respondents agreed (perceptions) that external factors influenced curriculum development. Additionally, the study investigated differences in median agreement (perceptions) according to demographic variables (independent).

In order to discern the influence of the specified variables, a web-based cross-sectional survey consisting of 58 questions was used to gather data. Since a careful search of the literature provided no already validated survey instrument to measure the variables in this study accurately, the study used a researcher-developed survey instrument to satisfy this investigation (Hillbrick, 1999). Moreover, the intent was to mitigate concerns about threats to external and construct validity. This was achieved by inviting members of the Percussive Arts Society College Pedagogy Committee, leaders from the National Conference on Percussion Pedagogy, and several hand-selected individuals to assist in the survey design process.

Using comparative statistics, the study discovered the magnitude of the differences between groups in reference to the dependent and independent variables (Douglas, 2009). In order to set the foundation for statistical analyses, research questions 1-4 used descriptive statistics to aggregate instructors’ perceptions of the NASM standards. Differences between groups were accomplished in hypotheses 1-12, which
were based on research questions 5-8. Additionally, the study measured the relationship between instructors’ perceptions. This was accomplished in hypotheses 13-15, which were based on research questions 9-11. The primary means of analyses were (a) descriptive statistics (frequency distributions, mean, median, mode, and standard deviation), (b) Cronbach’s Alpha, (c) Kruskal-Wallis test, (d) Games-Howell post hoc test, and (e) Spearman Rank Order Correlation Coefficient.

There were several limitations that may have affected outcomes. These included (a) survey timeline and sample size, (b) numerous non-significant results, and (c) neutral data achieved for several barriers and external factors. Although these may be limitations, they were not so egregious in that they prevented the accumulation of meaningful data.

The survey timeline was from August 16, 2011 to September 5, 2011. An invitation email was sent to prospective participants on August 9, 2011, followed by weekly reminders throughout the data collection phase. Of the approximately 350 instructors in NASM Regions 6 and 7, only 265 instructor email addresses were obtained. This was due to failed email links or lack of contact information listed in a school of music website and/or CMS directory. As a result, only 85 (32%) instructors entered the survey with 64 (24%) completing it. The goal was to obtain a 30% completion rate. This goal was not achieved, but recent research in applied percussion studies demonstrated similar response rates (Fisher, 2004; Nave, 2001; Sorensen, 2007).

The timing of this study may have been detrimental to the survey response rate. This was due to the fact that the survey was delivered during the last few weeks of the summer break period. Based on numerous out-of-office replies and other received
emails, many instructors were traveling for performances and clinics, on vacation, and/or inundated with preparing for the upcoming school year.

To that end, the survey timeline and participation rate contributed to this study not achieving the power analysis accomplished prior to data collection. The initial power analysis required 70 participants; in turn, the study was short by six completed surveys. It is plausible that the study was underpowered. This may have contributed to the string of non-significant results for 10 of 15 hypotheses, with three of the hypotheses coming very close to reaching a level of significance (ranging from .06 to .18). Nonetheless, the string of non-significant results was consistent with previous studies on the NASM standards and applied music. In fact, it may lend credence to Wexler’s (2008) conclusion that instructors, no matter the demographic group, do not vary much in attitudes, strategies, and goals.

Another limitation was that aggregated data (descriptive statistics) for barriers and a majority of external factors ranged from Neutral and Agree and contained large standard deviations. Thus, it was difficult to make definitive statements beyond the notion that aggregated data did not disprove findings from previous research. This is not to say that aggregated data did not provide meaningful information. Specifically, aggregated data for external factors indicated that instructors created curricula in isolation. Nonetheless, a Cronbach’s Alpha was run for each survey construct. Only one construct was below the suggested (> .70) level of reliability, thus indicating that the constructs were reliable.

Although there was a string of non-significant results and neutral aggregated data, statistical assumptions were met for the non-parametric tests in this study. Non-
parametric tests were used since the study used a non-random sampling procedure, thus violating a primary requirement for parametric tests. For the Kruskal-Wallis test, mutual independence was accomplished by allowing a participant to fill out one survey via Survey Monkey. Members were not permitted to retake or reenter the survey for editing once completed. Continuous distribution was measured via skewness between dependent and independent variables. Moreover, this study used the Spearman Rank Order Correlation Coefficient ($r_s$) since the normal distribution assumption for the parametric Pearson Product-Moment Correlation was not met. Assumptions for $r_s$ were met, because variables were measured on ordinal, interval, or ratio scales and possess a monotonic relationship (Laerd, 2011).

All ethical principles concerning research with human subjects were observed. Research did not deviate from the approval received from the Institutional Review Board (IRB). Participants were afforded the opportunity to assert their rights to participate, not participate, or quit after starting. Reminders of participants’ rights were outlined in the survey invitation and reminder emails. In addition, participants were required to read an overview of their rights prior to entering the web-based survey. Participants’ confidentiality and privacy were protected by assigning a number to identify responses versus by name in the survey database. Data for this study is securely stored, with only the author having permissions to access the master data spreadsheets.

The results from this study may encourage further investigation into the influence of the NASM standards on the development of applied percussion curricula. The literature review for this study intimated that instructors of all stripes may not be in compliance with the intent of the NASM standards (Rege, 2008; Ruch, 2009; Johnson,
Previous research also demonstrated that this may be due to a lack of content knowledge, limited professional development opportunities, or isolation from administrative oversight during curriculum development (Fredrickson, 2007; Gaunt, 2007; Shulman, 1986; Stark & Lattuca, 1997).

The 11 research questions and 15 hypotheses that guided this study set out to determine the veracity of the aforementioned issues in the development of applied percussion curricula. Although only five of the hypotheses had significant results, the data from this study supported several ideas proposed in previous studies. As a result, applied percussion instructors may benefit from analyzing and comparing this study with existent research surrounding factors that influence curriculum development which is in conjunction with the NASM standards.

**Implications**

No specific research studies exist to demonstrate a relationship between the NASM standards and the development of applied percussion curricula. Formal research on applied percussion curricula have been descriptive in nature and focused on the taxonomy and structure of tasks covered in the applied percussion lesson, rather than the curriculum development process. In turn, there was no template to follow when devising this study, thus requiring the use of previous studies outside of percussion to drive the research process. Eleven research questions and 15 hypotheses guided this study which investigated applied percussion programs and instructors in NASM Regions 6 and 7. The research questions were answered through an ex post facto non-experimental design using comparative statistics.
When referencing the mean, the primary findings indicated instructors agreed that four of six NASM standards were essential to the development of undergraduate applied percussion curricula. Responses ranged between Neutral and Agree for the other two standards (Composition and Improvisation Standard and Technology Standard). Frequency distributions (Figures 2 - 7) indicated that two thirds of the responses were in the Agree or Strongly Agree category for each of the six standards. This confirms the findings for the four standards in the Agree category with reference to the mean and a trend towards Agree for the other two.

In addition, data revealed that one (Performance) of six NASM standards was in the Agree category for the existence of NASM standards with the other five ranging between Neutral and Agree when referencing the mean (Tables 9 and 10). Frequency distributions indicated (Figures 8 - 11) that half of the instructors agreed that four (Performance, Musicianship and Analysis, History and Repertory, and Synthesis) of six standards exist. In turn, this demonstrates a slight inconsistency when comparing the mean and frequency distributions. Although greater than half of all instructors agreed that these four standards exist when using frequency distributions, all but the Performance standard had a 22 to 30 percent reduction in Agree and Strongly Agree responses when compared to responses for the essential nature of standards. In turn, instructors’ perceptions on the existence of standards are less than perceptions regarding the essential nature of standards. Finally, there was a strong positive association between the essential nature and existence of standards.

A secondary aspect was to examine potential barriers and external factors which may affect the existence of the NASM standards. Aggregated data (descriptive statistics)
indicated that responses were between Neutral and Agree for each barrier. However, a significant result was achieved for the Teaching Contract independent variable, with full-time contract instructors agreeing more strongly that barriers influenced the development of applied percussion curricula as compared to the other three groups. Frequency distributions (Figure 18) supported this assertion.

Thirdly, aggregated data (descriptive statistics) indicated that responses ranged between Neutral and Agree for six external factors and Disagree and Neutral for the other four. Professional Organizations and Professional Development Opportunities were the most agreed upon external factors with the influence of applied instructors, non-applied instructors, and joint professional development opportunities as the least agreed upon factors (Table 12). In addition, data indicated that percussion instructors may not receive the professional development necessary to meet Shulman’s ideal of synthesizing content knowledge. Finally, data indicated that applied percussion instructors may develop curricula in isolation from other school of music faculty and that there were neutral feelings toward administrative oversight and guidance.

**Aggregated Perceptions on the Essential Nature of the NASM Standards**

Research Question 1: To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills is essential to the undergraduate percussion curriculum?

When referencing the mean, data (descriptive statistics) indicated instructors agreed that four of the NASM standards were essential to the development of undergraduate applied percussion curricula; two ranged from Neutral and Agree. Frequency distributions (Figures 2 - 7) indicated that two thirds of the responses were in
the Agree or Strongly Agree category for each of the six standards. Similarly, Ruch’s (2009) study on applied vocal curricula indicated overwhelming support on the essential nature of the NASM educational experiences. Without regard to demographic data, it is logical to conclude that if instructors perceive the standards to be essential, then they will attempt to include them in the curriculum. Research question 11 will examine the strength of association between the essential nature and existence of standards in the curriculum. Moreover, mitigating circumstances, such as barriers or external factors may limit the existence of the standards. This will be examined in Research questions 7 and 9.

For research questions one, two, five, and six, one limitation is that this study only investigated instructors’ perceptions of the NASM standards. It did not investigate the extent of instructors’ knowledge of standards, if they use the standards as a template for curriculum development, and if the NASM standards were used in conjunction with other curriculum development materials. Nevertheless, it is significant to note that this may be the first time a research study attempted to ascertain instructors’ perceptions of the NASM standards in reference to applied percussion curricula. In turn, the data added to the dearth of research on this topic for both applied percussion and applied music, exceeding the typical taxonomy of content and structure of programs as seen in previous percussion studies by Clyde (2001), Fisher (2004), and Nave (2001).

**Aggregated Perceptions on the Existence of the NASM Standards**

Research Question 2: To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills exists in the current undergraduate percussion curriculum?
When referencing the mean, data (descriptive statistics) indicated that one of six NASM standards was in the Agree category for the existence of NASM standards with the other five ranging between Neutral and Agree (Tables 9 and 10). Frequency distributions indicated (Figures 8 - 11) that half of the instructors agreed that four (Performance, Musicianship and Analysis, History and Repertory, and Synthesis) of six standards exist. Although greater than half of all instructors agreed that these four standards exist, all but the Performance standard had a 22 to 30 percent reduction in Agree and Strongly Agree responses when compared to responses for the essential nature of standards.

Moreover, instructors ranged between Neutral and Agree for the existence of the composition and improvisation standard and the technology standard in current undergraduate applied percussion curricula. However, the bimodal nature of the data raised some concerns, because 36% of respondents disagreed with the existence of the technology standard. Likewise, 34% of instructors disagreed with the existence of the composition and improvisation standard. In turn, it is logical to conclude that there was a definite split amongst instructors, meaning some programs were not meeting the intent of the NASM language.

Previous research had similar results. Fisher (2004), Rege (2008), and Ruch (2009) indicated that schools of music were not meeting the intent of the technology standard while Johnson (2009) indicated a similar shortfall with the composition and improvisation standard. In conjunction with this study, there seems to be a trend with these two standards. There were many potential reasons for not meeting standards. Specifically, Colwell (2006) claimed that the entire undergraduate curriculum is
overloaded, meaning that there is not enough time to meet every standard when schools of music are required to meet multiple sets of standards, such as state standards for teaching certification and the NASM standards for music accreditation. Nonetheless, data indicated that instructors agreed to the existence of a majority of the NASM standards. This is in line with the purpose of the study: to determine if the NASM standards influenced the development of undergraduate applied percussion curricula. To that end, data added to the dearth of research on this topic for both applied percussion and applied music, exceeding the typical taxonomy of content and structure of programs as seen in previous percussion studies by Clyde (2001), Fisher (2004), and Nave (2001).

There were several limitations. First, reference the limitations presented in Research Question number one. The same limitations apply to Research Question number two. Additionally, an item analysis for each NASM standard within individual applied percussion programs was not undertaken. Therefore, it was not possible to identify how each program met the NASM standards. The study merely gauged instructors’ perceptions versus how they actually implement the standards.

**Aggregated Perceptions on Potential Barriers to the NASM Standards**

Research Question 3: To what extent do percussion instructors perceive funding, equipment, and facilities serve as barriers in developing students’ common body of knowledge and skills as specified by the NASM standards?

Aggregated data (descriptive statistics) indicated that responses were between Neutral and Agree for each barrier. Although descriptive data from Rege’s (2008) study indicated that barriers affected curriculum development, descriptive data for this study were inconclusive when referencing the mean alone for each barrier, which was due in
part to a large $sd$. When referencing the median, half of all participants were above and half of all participants were below the Neutral selection on a Likert-type scale. When considering differences based on demographic variables, there were significant results, which will be presented in the implications for Research Question 7. Therefore, it is logical to conclude that barriers influence curriculum development. One limitation is that this study only investigated instructors’ perceptions of barriers to curriculum development. The study did not provide survey items in regards to aspects which may pose as barriers beyond the aforementioned categorical areas.

Regardless, this may be the first study which attempted to find a connection between the NASM standards and potential barriers to the development of applied curricula. Moreover, the results of this study added to a previous discussion on budget management (finances) and logistical concerns (equipment and facilities) which were addressed at the 2009 National Conference on Percussion Pedagogy. The same is also applicable to Research Question number seven.

**Aggregated Perceptions on External Factors**

Research Question 4: To what extent do percussion instructors perceive that external factors such as administrators, colleagues, professional organizations, and professional development influence the development of the undergraduate percussion curricula in accordance with the NASM Common Body of Knowledge and Skills?

Previous research indicated that limited professional development opportunities affect the quality of curriculum development (Stark & Lattuca, 1997). Previous studies in percussion only identified professional development via highest degree obtained or training received during collegiate years, such as conservatory or university. Moreover,
the focus was philosophy of teaching in most percussion studies, such as totalization or specialization (Fisher, 2004). However, little has been discussed in terms of professional development for long-term pedagogical and/or curricular development training. The literature indicated that this may contribute to an inability to synthesize content knowledge domains or what Shulman (1986) referred to as the missing paradigm in education. As discussed in Chapter 4, there were mixed data in reference to the influence of external factors. Although there were no data from previous studies which supported the existence of ample pedagogical and curricular development opportunities for applied instructors, data from this study were inconclusive on whether instructors adequately interweaved the content knowledge domains as proposed by Hofer and Swan (2009) and Shulman (1986).

However, data supported the opinion that there is a tendency for music instructors to exist in isolation from other school of music instructors and administrators when devising curricula (Fredrickson, 2007; Gaunt, 2007; Johnson, 2010; Wexler, 2009). Data from this study indicated that at least a third of instructors create curricula in isolation to some degree. In turn, it is logical to conclude that some applied instructors developed curricula in isolation.

Aggregated data for this section do pose limitations. For example, the study did not specify types of professional development beyond the three categories presented in the survey. Moreover, the survey did not ask instructors whether or not they felt professional development opportunities were beneficial or if they took advantage of them. Further investigation into this area is required since data were inconclusive.
Regardless, there were meaningful data that added to the dearth of research on this topic for both applied percussion and applied music as a whole. The primary contribution is that this study added to the knowledge base by attempting to analyze elements which may contribute to the development of curricula in reference to a standards-based model. It is also significant because this may be the first percussion study to attempt to ascertain whether external factors influenced the development of curricula and connect to the broader theory of content knowledge in education.

**Demographic Variables and the Essential Nature of the NASM Standards**

Research Question 5 dealt with the fifth concern: Based on years of teaching, level of education, and teaching contract, what differences exist in percussion instructors' perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum? Three hypotheses were analyzed in reference to Research Question 5:

**H10.** Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

**H1a.** Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

**H20.** Based on level of education, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.
H2_a. Based on level of education, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H3_b. Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

H3_a. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills is essential for the undergraduate percussion curriculum.

Based on the three independent variables, data indicated no significant differences. In turn, instructors have similar opinions on the essential nature of the NASM standards. This is similar to Ruch’s (2009) study on the examination of vocal instructors’ perceptions of the essential nature of the NASM educational experiences. Ruch was able to find significant differences for two of five demographic groups: Institutional Type and Training. Although significant differences were found, they were minor because each independent variable only reached significance in one of eight educational experiences. Most importantly, her results for teaching contract and highest degree were in line with this study, meaning that teachers, regardless of demographic group, agreed with the essential nature of the NASM standards.

It seems logical to conclude that percussion instructors did not differ much in their perceptions on the essential nature of the NASM standards. Moreover, if percussion instructors perceived the standards to be essential, regardless of demographic group, then it is likely that the curriculum meets standards. However, it is possible that instructors
agreed with the NASM standards but for unknown reasons neglect to incorporate them. This will be discussed in Research Question 6.

Reference the limitations presented for Research Question number one. The same limitations apply to Research Question number five.

**Demographic Variables and the Existence of the NASM Standards**

Research Question 6 dealt with the sixth concern: Based on years of teaching, level of education, and teaching contract, what differences are there in percussion instructors' perceptions that the NASM Common Body of Knowledge and Skills exists in the current undergraduate percussion curriculum? Three hypotheses were analyzed in reference to Research Question 6:

**H₄₀.** Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

**H₄ₐ.** Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

**H₅₀.** Based on level of education, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

**H₅ₐ.** Based on level of education, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.
H6\(_0\). Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

H6\(_a\). Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that the NASM Common Body of Knowledge and Skills exists in the undergraduate percussion curriculum.

Based on the three independent variables, data indicated that instructors reached a level of significance for Years of Teaching and Teaching Contract. There were significant results for the Composition and Improvisation standard and Technology standard. Ruch (2009) noted significant differences with the same two variables. In this study, instructors with >30 Years of Teaching agreed more strongly with the existence of the two common bodies of knowledge and skills than those with 0-9 years of experience. Moreover, tenured instructors agreed more strongly with the existence of the two common bodies of knowledge and skills than full-time contract instructors. Frequency distributions (Figures 14-17) supported this assertion. On a descriptive level, Fisher (2004) indicated that 59% of percussion instructors had little to no experience in teaching electronic percussion (technology). Moreover, out of 10 possible areas of emphasis for her study, 73% of the same instructors indicated that technology was the least important component as it relates to the current curriculum and 68% indicated that it was the least ideal for the curriculum in comparison to the other areas. In conjunction with previous research, it is logical to conclude that there is a split amongst instructors’ perceptions, meaning some programs were not meeting the intent of the NASM language or that they interpreted the NASM language differently.
Significant differences may be due to the fact that tenured instructors are more aware of what is in the current curriculum or what is required to meet standards, partly because they may be the impetus for the overall curriculum. Furthermore, instructors with a greater level of experience may have more experience at dealing with the NASM standards and administrative practices within a given school of music. Reference the limitations presented in Research Questions number one and two. The same limitations apply to Research Question number six.

Demographic Variables and Potential Barriers to the NASM Standards

Research Question 7 dealt with the seventh concern: Based on years of teaching, level of education, and teaching contract, what differences exist in percussion instructors’ perceptions that barriers (finances, equipment, and facilities) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills? Three hypotheses were analyzed in reference to Research Question 7:

H\textsubscript{7}\textsubscript{0}. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that barriers (finances, equipment, and facilities) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

H\textsubscript{7}\textsubscript{a}. Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that barriers (finances, equipment, and facilities) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.
Based on level of education, there is no significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

Based on level of education, there is a significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that barriers influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

As stated previously, aggregated data (descriptive statistics) indicated that instructors’ responses ranged from Neutral and Agree for each barrier. However, there were significant differences for the Teaching Contract variable with full-time contract instructors agreeing more strongly than tenured, part-time contract and adjunct instructors. Frequency distributions (Figure 18) supported this assertion. An individual item analysis was accomplished to ascertain which barriers achieved a level of significance. In this instance, all three were significant. Previous research achieved
similar results. Specifically, Rege’s (2008) study on music technology indicated that there were similar barriers to curriculum development, though her research was limited to descriptive statistics. Nevertheless, it is logical to conclude that there were barriers to curriculum development beyond applied music.

There were several limitations to this study in reference to potential barriers. First, reference Research Question number three since the same limitations are applicable to Research Question number seven. Secondly, it is rather difficult to discern why full-time contract instructors differ so drastically from the other demographic groups. One insight may be that full-time contract instructors in this sample were not as engaged with budgetary and logistical processes in their program. This could be because there were multiple instructors within the program with responsibilities divided accordingly. In turn, further investigation should be done to evaluate why full-time contract instructors perceived a shortfall in all three areas. Secondly, this study only investigated instructors’ perceptions on barriers to curriculum development. The study did not provide survey items in regards to aspects which may pose as barriers beyond the aforementioned categorical areas.

Demographic Variables and External Factors

Research Question 8 dealt with the eighth concern: Based on years of teaching, level of education, and teaching contract, what differences exist in percussion instructors' perceptions that external factors (administrators, colleagues, professional development, and professional organizations) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills? Three hypotheses were analyzed in reference to Research Question 8:
**H10**. Based on years of teaching, there is no significant difference in percussion instructors’ perceptions that external factors (administrators, colleagues, professional development, and professional organizations) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H10a.** Based on years of teaching, there is a significant difference in percussion instructors’ perceptions that external factors (administrators, colleagues, professional development, and professional organizations) influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H11**. Based on level of education, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H11a.** Based on level of education, there is a significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

**H12**. Based on teaching contract, there is no significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.
H12a. Based on teaching contract, there is a significant difference in percussion instructors’ perceptions that external factors influence the development of undergraduate percussion curricula which is in accordance to the NASM Common Body of Knowledge and Skills.

Demographic data did not achieve significant results. In turn, it is not possible to make conclusions beyond the previously mentioned aggregated descriptive statistics. As such, instructors had similar opinions on the influence of external factors. Moreover, it seemed plausible that applied instructors developed curricula in isolation since aggregated data indicated a lack of involvement from other school of music instructors. Reference Research Question number four for limitations and contributions since the same statements are applicable to Research Question number eight.

Relationship Between Potential Barriers and Existence of NASM Standards

Research Question 9 dealt with the ninth concern: Is there a relationship between instructors’ perceptions in barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula? One hypothesis was analyzed in reference to Research Question 9:

H13b: There is no significant relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

H13a: There is a significant relationship between instructors’ perceptions of barriers to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.
As stated previously, aggregated data indicated that instructors’ responses ranged between Neutral and Agree, but a level of significance was achieved when analyzing barriers via demographic data. Thus, it was reasonable to conclude that barriers affected curriculum development. For this hypothesis, data did not achieve a level of significance, though it was very close to doing so ($p = .056$). This may have been due to an underpowered study. With a higher participation rate, a level of significance may have been achieved. The trend data indicated an inverse association, meaning that as barriers increased the existence of the standards decreased. However, further investigation which meets assumptions of power is necessary to accurately assert this proposal.

**Relationship Between External Factors and Existence of NASM Standards**

Research Question 10 dealt with the tenth concern: Is there a relationship between instructors’ perceptions about external factors and the existence of the NASM standards in applied percussion curricula? One hypothesis was analyzed in reference to Research Question 10:

**H14₀**: There is no significant relationship between instructors’ perceptions that external factors influence the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

**H14₁**: There is a significant relationship between instructors’ perceptions that external factors influence the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.
As stated previously, statistical analyses based on demographic data did not achieve a level of significance, but aggregated data (descriptive statistics) indicated mixed results. For instance, descriptive data from this study validated results from previous research on isolation in curriculum development and that pedagogical and curricular development opportunities were lacking. In turn, it is possible the three content knowledge domains need to be addressed throughout the instructor corps.

Although data indicated a medium positive association between external factors and the existence of the NASM standards, the diverse nature of the data make it rather difficult to come to a logical and definitive conclusion for the test. However, one conclusion is the aggregated data indicated that certain external factors are more influential to the existence of standards than others. Moreover, an independent item analysis for the ten external factors indicated that five achieved significant results. The Administrator Curriculum Review process achieved the highest degree of association with the existence of standards achieving $r_s = .421$. As a result, the greater the level of administrator involvement, the more likely the curriculum is to meet the NASM standards. This test could be misleading because previous studies noted isolation in applied music, meaning minimal administrative involvement. Regardless, there are instructors who identified a degree of administrative involvement, thus the positive association achieved in this study would make sense for some instructors.

**Relationship Between Essential Nature and Existence of NASM Standards**

Research Question 11 dealt with the eleventh concern: Is there a relationship between instructors’ perceptions of the essential nature as compared to the existence of
the NASM standards in applied percussion curricula? One hypothesis was analyzed in reference to Research Question 11:

**H15₀**: There is no significant relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

**H15₁**: There is a significant relationship between instructors’ perceptions that the NASM standards are essential to the development of applied percussion curricula and instructors’ perceptions as to the existence of the NASM standards in applied percussion curricula.

It is significant to note that data indicated a strong positive association between these two perceptions. Thus, one may conclude that as instructors’ perceptions of the essential nature of standards increase; it is more likely that the standards will exist in the curriculum. Moreover, it adds to the research base on applied music and the NASM standards. Although Ruch (2009) noted a significant difference in means between the existence and essential nature of the NASM educational experiences for applied vocal instructors, this study was able to determine a directional relationship between the two perceptions along with a difference in median agreement.

Nonetheless, a positive association is not the case for all instructors. There may be factors that affect the implementation of the standards that are out of an instructor’s control, meaning that a standard may not exist even if an instructor perceives a specific standard to be essential. A number of factors may be influential, such as the
aforementioned barriers (equipment, facilities, and funding) or even an instructor’s level of curricular content knowledge. Further research is needed to determine these factors.

**Recommendations**

At a minimum, there are several immediate applications for this study. First, information could be used to initiate a review of curricular materials and directional nature of curricula for individual programs, potentially serving as a self-inspection. In addition, it could serve as a unifying element within individual programs, meaning that each student, no matter the instructors, is given equal opportunity for success if the curriculum addresses each standard.

In essence, this study may serve as a catalyst to reexamine the role of standards based curricula in applied music. Both administrators and instructors should evaluate whether the NASM standards are applicable to applied music and serve as a logical framework. The literature review identified the University of Central Florida applied percussion curriculum as an example of a program which explicitly meets the standards and is centered on the NASM framework. Nevertheless, it is possible that instructors could determine that the NASM standards are a mere part of the process, meaning that other organizational standards and instructors’ personal and professional experiences work in tandem to develop sound curricula.

There is a need for effective leadership. School of music administrators must clarify the role of the NASM standards within applied music. This is important since the aforementioned studies noted a degree of isolation and that programs were not meeting portions of the NASM standards. If not addressed, then the value of the NASM standards may be diminished.
Additionally, this study demonstrated that professional development opportunities might not be sufficient in terms of the content knowledge domains as proposed by Shulman (1986). In order to address this possible shortcoming, instructors should evaluate the types of professional development they have received and/or is currently offered by a school of music. Applied percussion instructors are likely to be more effective at identifying specific needs since they are on the frontlines of instruction, but will need support from administrators in order to participate in various professional development opportunities.

Since data indicated that professional organizations may influence curriculum development, then seminars at PASIC or NCPP is a logical choice for a discussion on standards based curricula. Although each year there is a college pedagogy seminar at PASIC, little has been discussed on the technical aspects of structuring curricula and instructor development beyond philosophy, namely totalization or specialization as discussed by Nave (2001) and Fisher (2004). Most importantly, professional organizations should take the lead on devising professional development opportunities that synthesize the content knowledge domains (joint opportunities).

This study also noted that there were significant differences between demographic groups and barriers to curriculum development. Further investigation is needed to determine whether programs have adequate resources to meet both the National Standards for Percussion Facilities and Equipment (NCPP, 2003) and NASM standards. In addition, instructors should evaluate their programs to specify how finances, equipment, and facility issues limit success and the challenges they face when attempting to address these issues. At a minimum, the trend data from the aforementioned studies
can be used in tandem with the *National Standards for Percussion Facilities and Equipment* and *Understanding the College and University Percussion Program* (Franklin et al., 2009) as advocacy documents which encourage schools of music to provide adequate equipment, facilities, and funding in order to meet standards, sustain program success, and address individual needs.

This study may serve as a platform for future research on the NASM standards or standards based applied music at large. There are potential elements which may enable greater research success. These include using random sampling procedures or working with a larger sample base. Both elements may alleviate the power issues that occurred during this study. In addition, future research could focus on percussion programs in all nine NASM regions, choose regions separate from this study, or reevaluate Regions 6 and 7 at a later date. At a minimum, there is the potential to compare and contrast results from this study.

One major limitation to this study was the timeframe for data collection. The intent was not to collect data during the summer months or weeks leading up to the beginning of the school year. In turn, future research would likely benefit from conducting data collection sometime during the middle of a semester, which would possibly boost participation rates and mitigate the potential for an underpowered study.

Another refinement for future research would be to balance out the research design. It is possible that a qualitative or mixed methods design could provide a broader perspective about the role of the NASM standards in curriculum development. Moreover, adding interview and site visitation methods to the research design could minimize the need to create an extensive survey instrument. Furthermore, qualitative
measures could enable greater clarity for constructs contained within a survey and engender suggestions for additional research.

Future research should also seek to analyze how percussion programs meet each of the six NASM Common Body of Knowledge and Skills, but also the extent of instructors’ knowledge of the NASM standards. Assuming instructors were aware of the NASM standards or if they felt required to use them may have been an assumption that was taken for granted in this study. Accounting for how instructors meet individual standards may be considered another examination of the taxonomy of items within programs, but it would be interesting to engage in the specifics of each standard and what instructors perceive qualifies as meeting standards. In turn, this would go beyond the general nature of instructors’ perceptions on the essential nature and existence of standards.

Finally, this study attempted to aggregate ten external factors. It may be a more viable approach to analyze how each individual external factor is associated with the existence of the standards. Another option would be to conduct a factor analysis of the external factors, thus this would enable the research to combine factors that are statistically appropriate and isolate ones that are dissimilar. Depending on the extent of factor analysis, upwards to 60 individual tests could be accomplished, thereby requiring the researcher to find a way to narrow the scope of the study.

**Conclusions**

The 11 research questions and 15 hypotheses that guided this study set out to determine if the NASM standards influenced curriculum development in the field of applied percussion. When referencing the mean, the primary findings indicated
instructors agreed that four of six NASM standards were essential to the development of undergraduate applied percussion curricula with responses ranging between Neutral and Agree for the other two. Frequency distributions indicated that two thirds of the responses were in the Agree or Strongly Agree category for each of the six standards. As a result, it is reasonable to claim that instructors perceive the standards to be essential.

In addition, data revealed that one (Performance) of six NASM standards was in the Agree category for the existence of NASM standards with the other five ranging between Neutral and Agree when referencing the mean (Tables 9 and 10). Frequency distributions indicated that half of the instructors agreed that four (Performance, Musicianship and Analysis, History and Repertory, and Synthesis) of six standards exist. Although greater than half of all instructors agreed that these four standards exist, all but the Performance standard had a 22 to 30 percent reduction in Agree and Strongly Agree responses when compared to responses for the essential nature of standards. In turn, instructors’ perceptions on the existence of standards are less than perceptions regarding the essential nature of standards. There was a strong positive association between the essential nature and existence of standards. Thus, it was determined the NASM standards influence curriculum development.

A secondary aspect was to examine potential barriers and external factors which may affect the existence of the NASM standards. Aggregated data (descriptive statistics) indicated that responses were between Neutral and Agree for each barrier. However, a significant result was achieved for the Teaching Contract independent variable, with full-time contract instructors agreeing more strongly that barriers influenced the development of applied percussion curricula as compared to the other three groups. Aggregated data
(descriptive statistics) indicated that responses ranged between Neutral and Agree for six external factors and Disagree and Neutral for the other four. Finally, external factors data indicated the possibility of applied percussion instructors developing curricula in isolation from other school of music faculty and there were neutral feelings toward administrative oversight and guidance.

Although only five of the hypotheses had significant results, this study obtained meaningful data which were not achieved in previous applied percussion studies. The majority of non-significant results may have been due to the underpowered nature of the study. With a higher participation rate, a level of significance may have been achieved for additional hypotheses. Nonetheless, applied percussion instructors may benefit from analyzing and comparing this study with existent research surrounding factors that influence curriculum development which is in conjunction with the NASM standards.

The literature review for this study intimated that instructors of all stripes may not be in compliance with the intent of the NASM standards (Rege, 2008; Ruch, 2009; Johnson, 2009). Previous research also demonstrated that this may be due to a lack of content knowledge, limited professional development opportunities, or isolation from administrative oversight during curriculum development (Shulman, 1986; Stark & Lattuca, 1997; Gaunt, 2007; Fredrickson, 2007). Data from this research supported and/or did not disprove the aforementioned statements.

In addition, there was a split amongst instructors’ perceptions on the existence of the NASM standards and potential barriers to curriculum development. Previous research had similar results. Fisher (2004), Rege (2008), and Ruch (2009) indicated that schools of music were not meeting the intent of the technology standard while Johnson
(2009) indicated a similar shortfall with the composition and improvisation standard, meaning that these standards did not properly exist in the curriculum. For this study tenured instructors and instructors with >30 Years of Teaching agreed more strongly on the existence of standards than full-time contract instructors and instructors with 0-9 years of experience. For barriers to curriculum development, full-time contract instructors agreed more strongly than tenured, part-time contract and adjunct instructors that equipment, finances, and facilities were barriers. Rege (2008) indicated that there were similar barriers to curriculum development, though her research was limited to descriptive statistics. All things considered, data indicated that instructors’ responses ranged from Neutral and Agree for the existence of a majority of the NASM Common Body of Knowledge and Skills, thereby leading to the conclusion that the NASM standards influenced curriculum development.

The primary contribution was that this study added to the knowledge base by attempting to analyze elements which may contribute to the development of applied percussion curricula in reference to a standards-based model. It was also significant in that this may be the first percussion study to attempt to ascertain whether external factors influenced the development of curricula as well as connect to the broader theory of content knowledge in education. Overall, this study exceeded previous research which measured the typical taxonomy of content and structure of applied percussion programs.

There are many possible applications for this study. First, this study may serve as a platform for future research on the NASM standards or standards based education at large. In addition, instructors could use the information to initiate a review of curricular materials and the directional nature of curricula for individual programs. Moreover, the
research could serve as a catalyst for instructors, administrators, and professional organizations to reexamine the role of standards, but also to devise courses of action which will enable instructors to acquire and synthesize the content knowledge domains as proposed by Shulman (1986). At a minimum, the intent was to create discourse on how to improve applied percussion curricula.
References


Burdett, K. H. (2007). *A review of literature and texts relating to the percussion methods course including a proposal for a new text to meet concerns about course content and structure* (Unpublished Doctoral Dissertations). The Ohio State University, Columbus, OH.


Clyde, K. (2001). *A four-year curriculum for applied percussion at the undergraduate level* (Unpublished Master’s Thesis). Bowling Green State University, Bowling Green, OH.


Appendixes
Appendix A

Survey Development Letter

Dear Colleague,

My name is Kevin Clyde. I am currently pursuing a Ph.D. in Education at Northcentral University, Prescott, AZ, with an emphasis in instructional and curriculum development. I am conducting a study to determine the influence of the NASM standards on the development of undergraduate applied percussion curricula.

You are receiving this letter because of your stature in the percussion community. As a member of the Percussive Arts Society College Pedagogy Committee, National Conference on Percussion Pedagogy, or highly respected position, your expert advice would greatly benefit the direction of my study. I am requesting your assistance with validating my survey prior to releasing it to the intended population of study - percussion instructors at schools of music in NASM Regions 6 and 7.

As of now, the survey contains 81 multiple choice questions which are developed from the 11 research questions guiding the proposed study. The format will be a web-based survey using SurveyMonkey.com. **In three days** you will receive an email with a link to the survey. I request that you take the survey, critique it, and offer constructive suggestions for improvement. Your input will assist with editing and modifying the survey instrument, thereby ensuring a greater degree of validity and reliability.

**After receiving your valued feedback, I will enter participants in a random drawing which will award four annual Percussive Arts Society student memberships.** However, I will need your email address in order to enroll you in the drawing and to notify the winner. This request is voluntary. The intent is for the winner to transfer the award to an undergraduate percussion student. After the winner is announced, we can arrange payment for the membership fee via email.

By completion of this electronic survey you agree that you understand the procedures and any risks and benefits involved in this research. You are free to refuse to participate or to withdraw your consent to participate in this research at any time without penalty or prejudice; **your participation is entirely voluntary.** Your privacy will be protected because you will not be identified by name as a participant in this project. Thank you for your time and consideration.
If you have questions, please feel free to contact me or the committee chair at the below email addresses or through the PAS portal. Your participation in this study will be greatly appreciated.

Sincerely,

Kevin Clyde
Email: clydekevin@hotmail.com
Secondary: kevin.clyde@dover.af.mil
Phone: 843-991-8227
PAS Member since 1997
Committee Chair, Dr Shad Bailey, Email: SBailey@ncu.edu
Appendix B
Survey Invitation Letter

Dear Colleague,

My name is Kevin Clyde. I am currently pursuing a Ph.D. in Education at Northcentral University with an emphasis in instructional and curriculum development. I am conducting a study to determine the influence of the NASM standards on the development of undergraduate applied percussion curricula.

You are receiving this letter because of your stature in the percussion community and you are an applied percussion instructor in NASM Regions 6 or 7. In one week you will receive an email with a link to a web-based survey through SurveyMonkey.com. It should only take 10-15 minutes of your time. It contains 58 multiple choice questions which are developed from the 11 research questions guiding the proposed study. The survey will be open for a 3-week period from 16-Aug-2011 to 5-Sep-2011.

After receiving your valued input, I will enter participants in a random drawing which will award four Percussive Arts Society student memberships. However, I will need your email address in order to enroll you in the drawing and to notify the winner. This request is voluntary. The intent is for the winners to transfer the award to an undergraduate percussion student. After the winners are announced, we can arrange payment for the membership fees via email.

You are free to refuse to participate or to withdraw your consent to participate in this research at any time without penalty or prejudice; your participation is entirely voluntary. Your privacy will be protected because you will not be identified by name as a participant in this project. Thank you for your time and consideration. Please contact me or the committee chair should you have any questions or concerns.

Sincerely,

Kevin Clyde
Email: clydekevin@hotmail.com
Secondary: kevin.clyde@dover.af.mil
Phone: 843-991-8227
PAS Member since 1997
Committee Chair, Dr Shad Bailey, Email: SBailey@ncu.edu
Appendix C

Proposed Survey for Dissertation

Key: SD = Strongly Disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly Agree

Please read the informed consent prior to entering the survey. After reading, please check the consent box at the bottom to affirm your participation in this research study.

Purpose. You are invited to participate in a research study being conducted for a dissertation at Northcentral University in Prescott, Arizona. The purpose of this study is to examine, based on instructors’ perceptions, the influence of the NASM standards on the development of undergraduate applied percussion curricula. This study focuses on current perceptions and no attempt will be made to sway opinions. The intent is to use instructors' perceptions to advance the discussion on curriculum development in applied music. There is no deception in this study.

Participation requirements. You will be asked to complete a one-time survey consisting of 58 multiple choice questions. The session will last approximately 10-15 minutes.

Research Personnel. The following people are involved in this research project and may be contacted at any time: Kevin M. Clyde. Email: clydekevin@hotmail.com or kevin.clyde@dover.af.mil; Phone: 843-991-8227. Committee Chair, Dr. Shad Bailey. Email: SBailey@ncu.edu.

Potential Risk/ Discomfort. Although there are no known risks in this study, you may withdraw at any time and you may choose not to answer any question that you feel uncomfortable in answering.

Potential Benefit. There is a direct benefit for you to participate in this research. After receiving your valued input, participants will be entered into a random drawing which will award four annual Percussive Arts Society student memberships. Participation in this process is also voluntary. However, you will need to provide an email address in order to enroll in the drawing. The intent is for the winners to transfer the award to an undergraduate percussion student. Four membership accounts will be set up with the Percussive Arts Society under the name of the instructors to receive the awards. The instructors will be notified by email and directed to contact the Percussive Arts Society and register their student for the one-time annual membership. In addition, you will receive a copy of the final manuscript at the conclusion of the study.

Anonymity/ Confidentiality. The data collected in this study are confidential. All data are coded and your name or contact information will not be associated with them. In addition, the coded data are made available only to the researcher associated with this project.
Right to Withdraw. You have the right to withdraw from the study at any time without penalty. You may omit questions on this one-time survey if you do not want to answer them. Please feel free to contact Kevin Clyde or Dr. Shad Bailey should you wish further clarification on the purpose of the study and/or survey questions.

Consent to Participate. I have read the above description of the study entitled: A Quantitative Analysis Based on Instructors’ Perceptions of the National Association of Schools of Music Influence on the Development of Undergraduate Applied Percussion Curricula. I understand the conditions of my participation. By checking the consent box, I agree to participate in the study.

Consent
Decline

Q1. To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills is essential to the undergraduate percussion curriculum?

1. As described under the NASM Common Body of Knowledge and Skills, the performance standard is essential to the development of applied percussion curricula.


2. As described under the NASM Common Body of Knowledge and Skills, the musicianship skills and analysis standard is essential to the development of applied percussion curricula.


3. As described under the NASM Common Body of Knowledge and Skills, the composition and improvisation standard is essential to the development of applied percussion curricula.


4. As described under the NASM Common Body of Knowledge and Skills, the history and repertory standard is essential to the development of applied percussion curricula.


5. As described under the NASM Common Body of Knowledge and Skills, the technology standard is essential to the development of applied percussion curricula.

6. As described under the NASM Common Body of Knowledge and Skills, the synthesis standard is essential to the development of applied percussion curricula.


Q2. To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills exists in the current undergraduate percussion curriculum?

7. As described under the NASM Common Body of Knowledge and Skills, the performance standard exists in the current applied percussion curriculum.


8. As described under the NASM Common Body of Knowledge and Skills, the musicianship skills and analysis standard exists in the current applied percussion curriculum.


9. As described under the NASM Common Body of Knowledge and Skills, the composition and improvisation standard exists in the current applied percussion curriculum.


10. As described under the NASM Common Body of Knowledge and Skills, the history and repertory standard exists in the current applied percussion curriculum.


11. As described under the NASM Common Body of Knowledge and Skills, the technology standard exists in the current applied percussion curriculum.


12. As described under the NASM Common Body of Knowledge and Skills, the synthesis standard exists in the current applied percussion curriculum.

Q3. To what extent do percussion instructors perceive funding, equipment, and facilities serve as barriers in developing students’ common body of knowledge and skills as specified by the NASM standards?

13. In your program, inadequate funding serves as a barrier to developing students’ common body of knowledge and skills as described in the NASM Handbook.


14. In your program, the condition or availability of percussion instruments serves as a barrier to developing students’ common body of knowledge and skills as described in the NASM Handbook.


15. In your program, school facilities serve as a barrier to developing students’ common body of knowledge and skills as described in the NASM Handbook.


Q4. To what extent do percussion instructors perceive that external factors such as administrators, colleagues, professional organizations, and professional development influence the development of undergraduate percussion curricula which is in accordance with the NASM Common Body of Knowledge and Skills?

16. School of music administrators’ influence the development of undergraduate applied percussion curricula which is in accordance with the NASM Common Body of Knowledge and Skills.


17. School of music administrators have a defined curriculum review process for applied music curricula.


18. School of music administrators direct applied music instructors to comply with the NASM Common Body of Knowledge and Skills.

19. Applied music colleagues influence the development of undergraduate applied percussion curricula which is in accordance with the NASM Common Body of Knowledge and Skills.


20. Non-applied music colleagues influence the development of undergraduate applied percussion curricula which is in accordance with the NASM Common Body of Knowledge and Skills.


21. Professional organizations, such as the Percussive Arts Society, influence the development of undergraduate applied percussion curricula which is in accordance with the NASM Common Body of Knowledge and Skills.


22. Professional development opportunities influence the development of undergraduate applied percussion curricula which is in accordance with the NASM Common Body of Knowledge and Skills.


23. Professional development opportunities for pedagogical development are offered by your school of music.


24. Professional development opportunities for curriculum development are offered by your school of music.


25. Joint professional development opportunities for curriculum and pedagogical development are offered by your school of music.

Q1. To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills is essential to the undergraduate percussion curriculum?

26. It is essential to include the NASM performance standard when developing applied percussion curricula.


27. It is essential to include the NASM musicianship skills and analysis standard when developing applied percussion curricula.


28. It is essential to include the NASM composition and improvisation standard when developing applied percussion curricula.


29. It is essential to include the NASM history and repertory standard when developing applied percussion curricula.


30. It is essential to include the NASM technology standard when developing applied percussion curricula.


31. It is essential to include the NASM synthesis standard when developing applied percussion curricula.


Q2. To what extent do percussion instructors perceive that the NASM Common Body of Knowledge and Skills exists in the current undergraduate percussion curriculum?

32. The NASM performance standard exists in the current applied percussion curriculum.

33. The NASM musicianship skills and analysis standard exists in the current applied percussion curriculum.

34. The NASM composition and improvisation standard exists in the current applied percussion curriculum.

35. The NASM history and repertory standard exists in the current applied percussion curriculum.

36. The NASM technology standard exists in the current applied percussion curriculum.

37. The NASM synthesis standard exists in the current applied percussion curriculum.

Q3. To what extent do percussion instructors perceive funding, equipment, and facilities serve as barriers in developing students’ common body of knowledge and skills as specified by the NASM standards?

38. Inadequate funding is currently a detriment to developing student’s common body of knowledge and skills in your applied percussion program.

39. Instrument quality and availability is currently a detriment to developing student’s common body of knowledge and skills in your applied percussion program.

40. School facilities are currently a detriment to developing student’s common body of knowledge and skills in your applied percussion program.
Q4. To what extent do percussion instructors perceive that external factors such as administrators, colleagues, professional organizations, and professional development influence the development of undergraduate percussion curricula in accordance with the NASM Common Body of Knowledge and Skills?

41. Developing applied percussion curricula which is in accordance with the NASM standards is influenced by school of music administrators.


42. Current school of music policy has a defined review process for applied music curricula.


43. Current school of music policy directs applied music instructors to comply with the NASM common body of knowledge and skills.


44. The applied percussion instructor consults with applied music colleagues on the development of curricula which is in accordance with the NASM Common Body of Knowledge and Skills?


45. The applied percussion instructor consults with non-applied music colleagues on the development of curricula which is in accordance with the NASM Common Body of Knowledge and Skills.


46. The development of undergraduate applied percussion curricula which is in accordance with the NASM standards is influenced by professional organizations such as the Percussive Arts society.


47. The development of undergraduate applied percussion curricula which is in accordance with the NASM standards is influenced by professional development opportunities.

48. Your school of music provides ample professional development opportunities, such as pedagogical development.


49. Your school of music provides ample professional development opportunities, such as curriculum development courses.


50. Your school of music provides ample professional development opportunities, such as joint curriculum and pedagogical development courses.


**Demographic Questions**

51. Please indicate number of years teaching undergraduate applied percussion.

52. Please indicate highest level of education completed.

1. Bachelor’s  2. Master’s  3. Doctorate

53. Please indicate current teaching contract.


55. Please indicate type of institution where you teach.

1. University/College  2. Conservatory

54. Please indicate NASM region where you teach.

1. Region 6  2. Region 7

56. Please indicate if you are the Director of Percussion Studies.

1. Yes  2. No

57. Please provide your email address if you wish to be entered in a random drawing which will award three annual Percussive Arts Society student memberships. The intent is for the winners to transfer the award to an undergraduate percussion student.
58. Please critique the survey and offer constructive suggestions for improvement in terms of survey functionality, research questions, survey questions, and overall impression.
Appendix D

Institutional Review Board Approval

July 29, 2011

Reference: Kevin M. Clyde

IRB: 2011-07-29-115

Dear Dr. Shad Bailey, Dissertation Chair:

On July 29, 2011, Northcentral University approved Kevin’s research project entitled, *A Quantitative Analysis Based on Instructors’ Perceptions of the National Association of Schools of Music Influence on the Development of Undergraduate Applied Percussion Curricula.*

IRB approval extends for a period of one year and will expire on July 29, 2012.

Please inform the Northcentral University IRB when the project is completed.

Should the project require an extension, an application for an extension must be submitted within three months of the IRB expiration date.

In the interim, if there are any changes in the research protocol described in the proposal, a written change request describing the proposed changes must be submitted for approval.

Sincerely,

Dr. Chris Cozby
IRB Committee Chair
Northcentral University